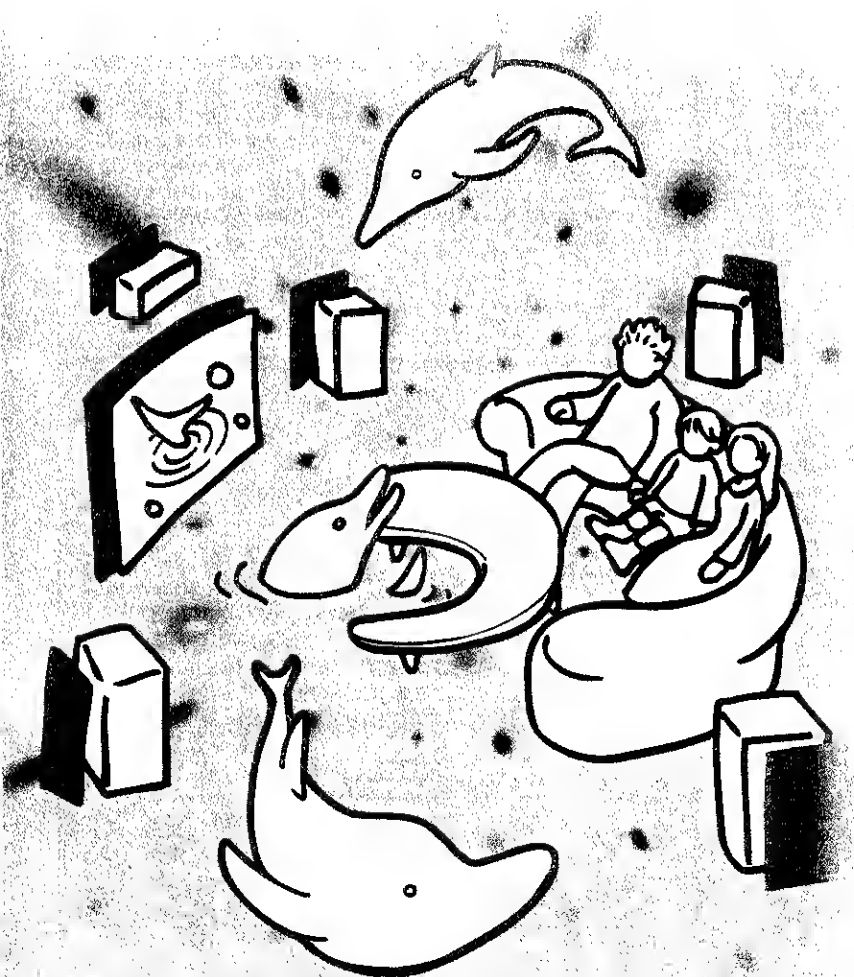
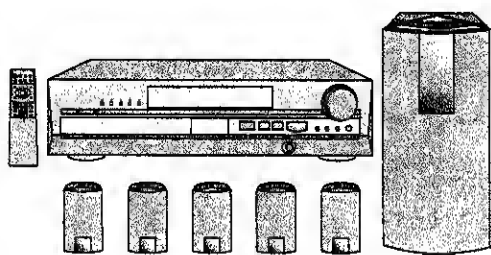


DVD Home Theater Sound System

Operating Instructions

Model No. **SC-HT70**



Panasonic®

Note:

"EB" on the packaging indicates the United Kingdom.

Before connecting, operating or adjusting this product, please read these instructions completely. Please keep this manual for future reference.

This unit responds to the region number information on DVD. This unit can only play DVD if the region number of the disc matches the region number of this unit.

See page 5 for details.

Dear Customer

Thank you for purchasing this product.
For optimum performance and safety, please read these instructions carefully.

| | | |
|------------------|-----------------------------------|-----------------|
| System | | SC-HT70 |
| Main unit | | SA-HT70 |
| Speakers | Front, center and surround | SB-AFC80 |
| | Subwoofer | SB-W80A |

CAUTION!

DO NOT INSTALL, OR PLACE THIS UNIT, IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED, TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

WARNING:

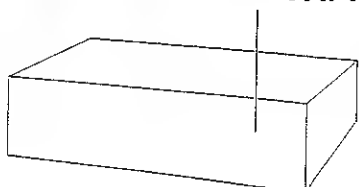
TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPLIANCE TO RAIN, SPLASHING, DRIPPING OR MOISTURE.

| | |
|------------------|---|
| DANGER | • VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR) |
| CAUTION | • VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (RECOMMEND 1) |
| ATTENTION | • RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU PASSAGE AU. |
| ADVARSEL | • SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSETTELSE FOR STRÅLING. |
| VARO! | • AVATTAMISSA OLET ALTUUTIN NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTELYLLÄ. ÄLÄ KATSO SÄTEISERN. |
| VARNING | • SYNLIG OCH USYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN. |
| ADVARSEL | • SYNLIG OG USYNLIG LASERSTRÅLING NÄR ØKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN. |
| VORSICHT | • SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN. |
| 注意 | • 打开时有可见及不可见激光辐射。避免激光束照射。 |
| 注意 | • ここを開くと、可視及び不可視のレーザー光が出ます。ビームを直接見たり、照らさないでください。 RQLS8233 |

(Inside of product)

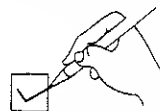


LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT



Back of product

Supplied accessories



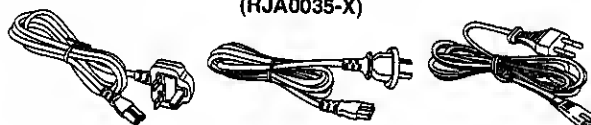
Please check and identify the supplied accessories.
Use numbers indicated in parentheses when asking for replacement parts.

☐ AC mains lead 1 pc.

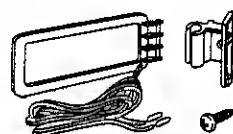
For United Kingdom (RJA0053-2X)

For Australia and N.Z. (RJA0035-X)

For others (RJA0019-2K)



☐ AM loop antenna set (RSA0012) 1 pc.



☐ FM indoor antenna 1 pc.

For Australia and N.Z. (RSA0006-J)

For United Kingdom and others (RSA0007)



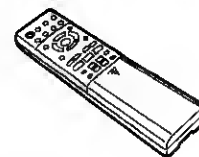
☐ Video connection cable (RJA1P016B15A) 1 pc.



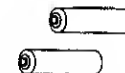
☐ Antenna plug adaptor (only for United Kingdom) (SJP9009) 1 pc.



☐ Remote control transmitter (EUR7502X20) 1 pc.



☐ Batterias 2 pcs.



☐ Speaker feet 25 feet
Replacements sold in sets of 4 feet. (RFA0631A-K)



☐ Speaker stickers 1 sheet (2 sets)
One set is extra. The sheet cannot be purchased separately.



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SUOMI

VAROITUS!

ÄLÄ ASENNATA TAI LAITETA TÄTÄ LAITETTA KABINETTITYYPPISEEN KIRJAKAAPPIIN TAI MUUHUN SULJETTUUN TILAAN, JOTTA TUULETUS ONNISTUISI. VARMISTA, ETTÄ VERHO TAI MIKÄÄN MUU MATERIAALI EI HUONONNA TUULETUSTA, JOTTA VÄLTETTÄISIIN YLIKUUMENEMISESTA JOHTUVA SÄHKÖISKU- TAI TULIPALOVAARA.

VAROITUS!

LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VAROITUS:

TULIPALO-, SÄHKÖISKUVAARAN TAI MUUN VAHINGON VÄHENTÄMISEKSI EI LAITETTA SAA ALTISTAA SATEELLE, ROISKEELLE, VESIPISAROILLE TAI KOSTEUDELLE.

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NORSK

ADVARSEL!

APPARATET MÅ IKKE Plasseres i en bokhylle, et innebygget kabinet eller et annet lukket sted hvor ventilasjonsforholdene er utilstrekkelige. Sørg for at gardiner eller lignende ikke forverrer ventilasjonsforholdene, så risiko for elektrisk sjokk eller brann forårsaket av overheting unngås.

ADVARSEL!

DETTE PRODUKTET ANVENDER EN LASER. BETJENING AV KONTROLLER, JUSTERINGER ELLER ANDRE INNGREP ENN DE SOM ER BESKREVEN I DENNE BRUKSANVISNING, KAN FØRE TIL FARLIG BESTRÅLING. DEKSLER MÅ IKKE ÅPNES, OG FORSØK ALDRI Å REPARERE APPARATET PÅ EGENHÅND. ALT SERVICE OG REPARASJONSARBEID MÅ UTFØRES AV KVALIFISERT PERSONELL.

ADVARSEL:

FOR Å REDUSERE FAREN FOR BRANN, STRØMSJOKK ELLER SKADER PÅ PRODUKTET, MÅ DETTE APPARATET IKKE UTSETTES FOR REGN, VANNSPRUT, VANNØRPER ELLER FUKTIGHET.

Caution for AC Mains Lead

(For United Kingdom)



("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below.

If in any doubt please consult a qualified electrician.

IMPORTANT


The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below. Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

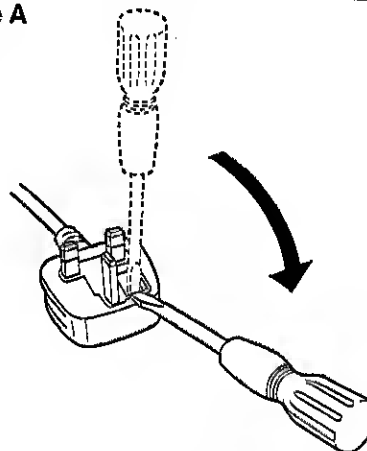
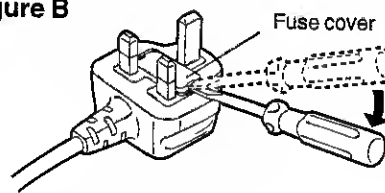


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

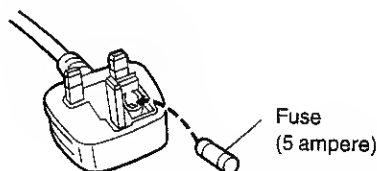
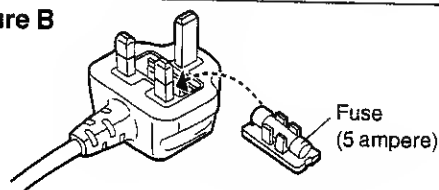


Figure B



Safety precautions

Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life.

Place it at least 15 cm away from wall surfaces to avoid distortion and unwanted acoustical effects.

Do not place heavy items on the unit.

Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire.

Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other place where DC is used.

AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead.

Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock.

Do not handle the plug with wet hands. This can cause electric shock.

Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction.

Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer.

Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these instructions occurs, disconnect the AC mains lead and contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.

Extend operating life by disconnecting the unit from the power source if it is not to be used for a long time.

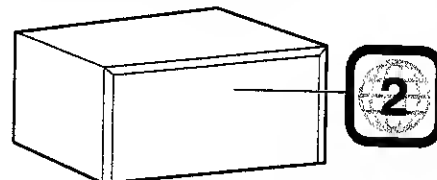
Region numbers

Region numbers are allocated to DVD players and software according to where they are sold.

DVDs can be played on this unit if their region number is the same or includes the same number, or if the DVD is marked "ALL".

Confirm the region number for this unit before choosing discs. The number for this unit is indicated on the rear panel.

Example



For the United Kingdom and Continental Europe

Region numbers supported by this unit

- The region number of this unit is "2".
- You can play DVDs marked with labels containing "2" or "ALL".



For Australia and N.Z.

Region numbers supported by this unit

- The region number of this unit is "4".
- You can play DVDs marked with labels containing "4" or "ALL".



For Others

Region numbers supported by this unit

- The region number of this unit is "5".
- You can play DVDs marked with labels containing "5" or "ALL".



Type of discs

This system can playback discs bearing any of the marks:



This system does not have a DTS decoder so it cannot play audio encoded with DTS.

This system can not play the following discs

- | | | |
|--|-------------------|-----------------|
| • DVD with an unsuitable region number | • DVD-RAM | • CDV |
| • DVD-Audio | • +RW | • CD-G |
| • DVD-ROM | • DVD-RW | • CVD |
| • DVD-R | • DIVX Video Disc | • SACD |
| | • CD-ROM | • SVCD |
| | • VSD | • Photo CD etc. |

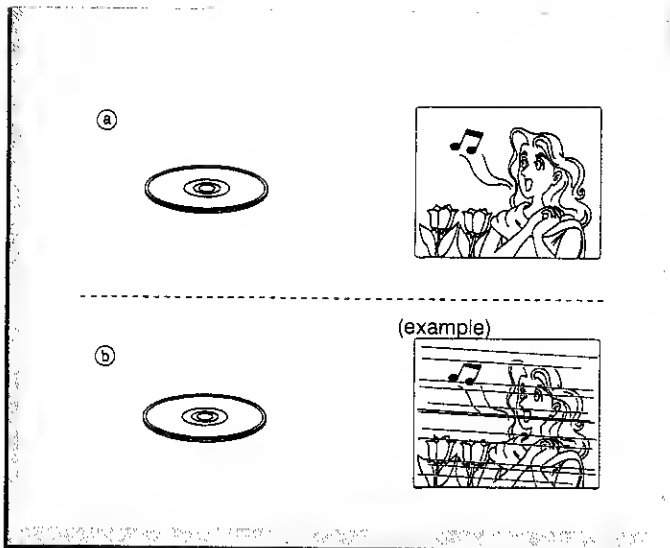
Disc symbols used in these operating instructions

The functions you can use depend on the type of disc you play. These marks are used to indicate which type of disc is explained.

- | | |
|--|------------------------------------|
| | Feature can be used with DVD-Video |
| | Feature can be used with video CD |
| | Feature can be used with audio CD |

Some features cannot be used even if these symbols are indicated.

Before use



Type of disc for the type of TV

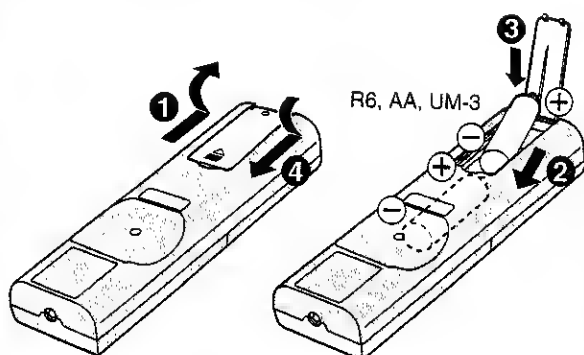
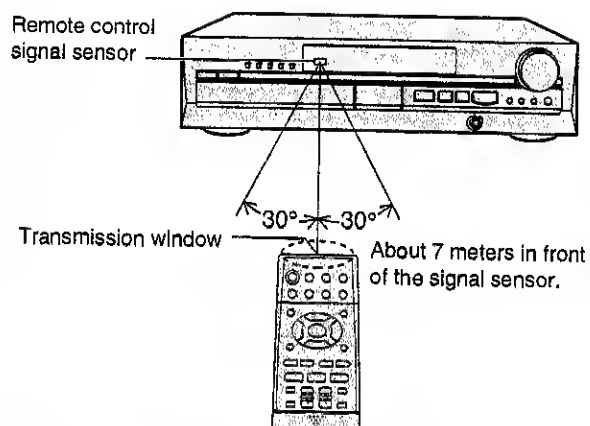
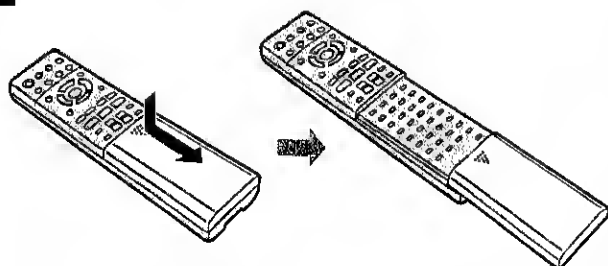
DVDs and video CDs are recorded using either PAL or NTSC. Refer to this table when selecting discs.

- Ⓐ Clear images are shown on the screen.
- Ⓑ No clear images shown on the screen.

| TV type | Disc | TV monitor |
|-----------------|------|------------|
| Multi-system TV | PAL | Ⓐ ✓ |
| | NTSC | Ⓐ ✓*1 |
| NTSC TV | PAL | Ⓑ × |
| | NTSC | Ⓑ × |
| PAL TV | PAL | Ⓐ ✓ |
| | NTSC | Ⓐ ✓*2 |

*1 If you select "NTSC" in "NTSC Disc Output" (→ page 42), the picture may be clearer.

*2 The factory preset for "NTSC Disc Output" is "PAL60", so no changes to the initial settings are necessary. (If your television is not equipped to handle PAL 525/60 signals the picture will not be shown correctly.)

A**B****C**

Concerning the remote control

A Battery installation

Use of batteries

- Align the poles (+ and -) properly when inserting the batteries. Press in and down towards the minus end.
- Do not mix old and new batteries, or batteries of different types.
- Do not recharge ordinary dry cell batteries.
- Do not heat or disassemble the batteries. Do not allow them to contact flame or water.
- Remove the batteries if the unit is not to be used for a long time.
- Do not keep together with metallic objects such as necklaces.
- Do not use batteries if the covering has been peeled off.
- Do not use rechargeable type batteries.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire. If electrolyte leaks from the batteries, consult your dealer. Wash thoroughly with water if electrolyte comes in contact with any part of your body.

B Correct method of use

Operation notes

- Do not place obstacles between the remote control signal sensor and remote control unit.
- Do not expose the remote control signal sensor to direct sunlight or to the bright light of a fluorescent light.
- Take care to keep the remote control signal sensor and end of the remote control unit free from dust.
- If this system is installed in a rack with glass doors, the glass doors' thickness or color might make it necessary to use the remote control a shorter distance from the system.

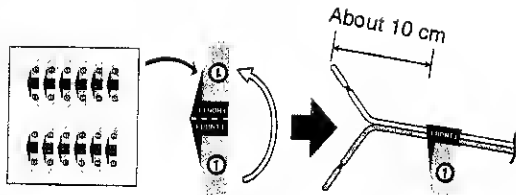
To prevent damage

- Never place heavy items on top of the unit.
- Do not disassemble or reconstruct the unit.
- Do not spill water or other liquids into the unit.

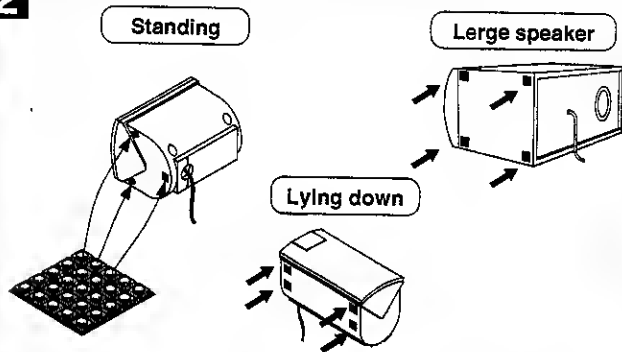
C How to open the remote control

Before use

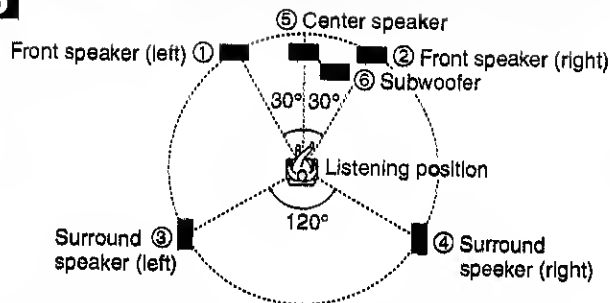
1



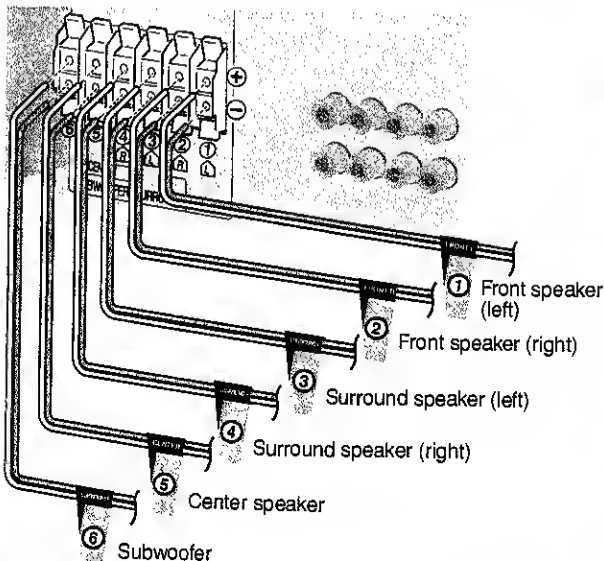
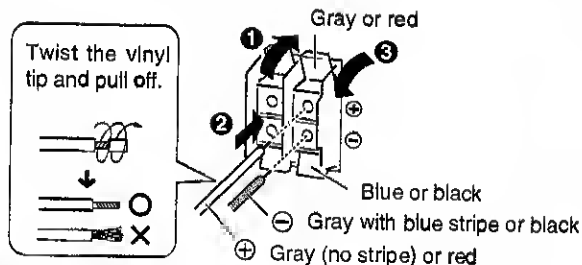
2



3



4



Speaker set-up

Refer also to "Speaker set-up", a separate guide included with these operating instructions.

1

Attach the stickers

The 5 small speakers are the same.

Attach the stickers to the speaker cords.

- ① - ⑤: Attach stickers 1 to 5 to the cords of the 5 small speakers (2×front, 2×surround, and 1×center: SB-AFC80).
- ⑥: Attach sticker 6 to the cord of the large speaker (subwoofer: SB-W80A).

2

Attach the rubber feet

Attach these rubber feet to prevent vibration causing the speakers to move or fall over.

The small speakers can be set-up either standing or lying down. Use 3 or 4 feet per speaker.

3

Position the speakers

- Place the front left and right speakers (①, ②) either side of the television.
- Place the center speaker (⑤) near the television, above or below it.
- Place the surround speakers (③, ④) either side of the listening position, or slightly to the rear, about 1 meter higher than ear level.
- Put the subwoofer (⑥) near the television, on the floor or a sturdy shelf so that it won't cause vibration.

① - ⑥: Position the speakers as indicated in the diagram using the stickers as a guide.

The front, center, and surround speakers should be placed at approximately the same distance from the listening position. The angles in the diagram are approximate.

Note

Vibration caused by the center speaker can disrupt the picture if it is placed directly on the television. Put the center speaker on a rack or shelf.

4

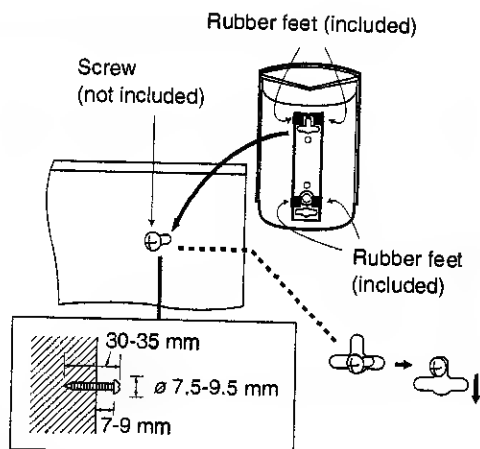
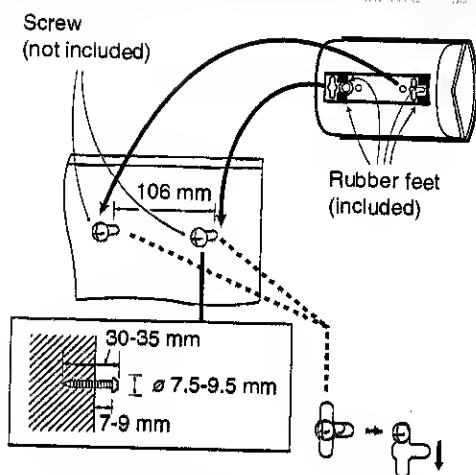
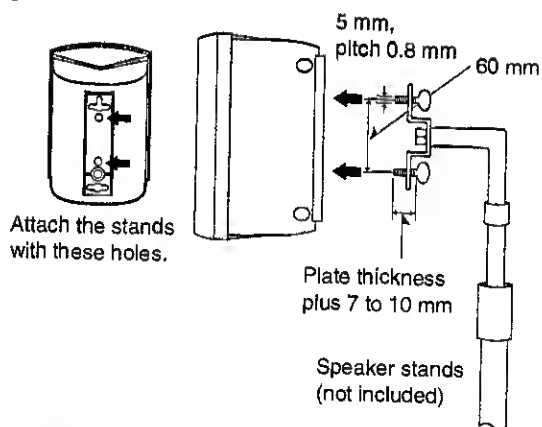
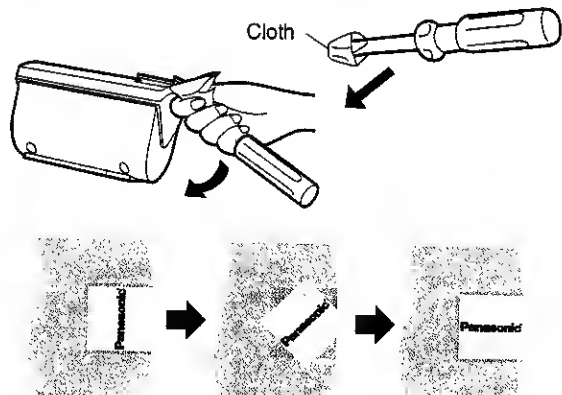
Connect the speakers to the unit

Speaker cords

- Connect the cords so the numbers on the stickers match the numbers under the terminals.
- Connect the gray cords with the blue stripe ⊖ to the blue terminals.
- Connect the gray cords without stripes ⊕ to the gray terminals.
- Connect the subwoofer's red cord ⊕ to the red terminal and the black cord ⊖ to the black terminal.
- Ensure the wires of the cords are fully inserted so they do not touch each other and short circuit.

Note

After you have completed set-up and connection, wind the excess cord and keep together with string.

A**B****C****D**

Speaker set-up

Attaching to a wall

- A To attach vertically**
- B To attach horizontally**

Attach four rubber feet to each speaker, ensuring they do not cover the holes.

Note

The surface you attach the speakers to must be able to support over 5 kg per screw.

Attaching to speaker stands

Note

Ensure the following conditions are met when you purchase your speaker stands.

- Observe the diameter and length of the screws and the distance between screws as shown in the diagram.
- The stands must be able to support over 5 kg.
- The stands must be stable even if the speakers are in a high position.

Moving the brand plate

You can rotate the brand plate if you choose to set up the small speakers horizontally.

(Prevent damage to the plate by wrapping the end of the screwdriver with cloth.)

Insert the screwdriver under the plate and lift it. Rotate the plate to the required position.

If irregular coloring occurs on your television

These speakers are designed to be used close to a television, but the picture may be affected with some televisions and set-up combinations.

If this occurs, turn the television off for about 30 minutes.

The television's demagnetizing function should correct the problem.

If it persists, move the speakers further away from the television.

Note

- Set the speakers up on an even surface to prevent them from falling. Take proper precautions to prevent the speakers from falling if you cannot set them up on an even surface.
- The speaker nets cannot be removed.

Notes on speaker use

■ You can damage your speakers and shorten their useful life if you play sound at high levels over extended periods.

■ Reduce the volume in the following cases to avoid damage.

- When playing distorted sound.
- When the speakers are receiving howling from a microphone or record player, noise from FM broadcasts, or continuous signals from an oscillator, test disc, or electronic instrument.
- When adjusting the sound quality.
- When turning the unit on or off.

Positioning for best effect

How you set up your speakers can affect the bass and the sound field. Note the following points.

- Place speakers on flat secure bases.
- Placing speakers too close to floors, walls, and corners can result in excessive bass. Cover walls and windows with thick curtain.

Caution

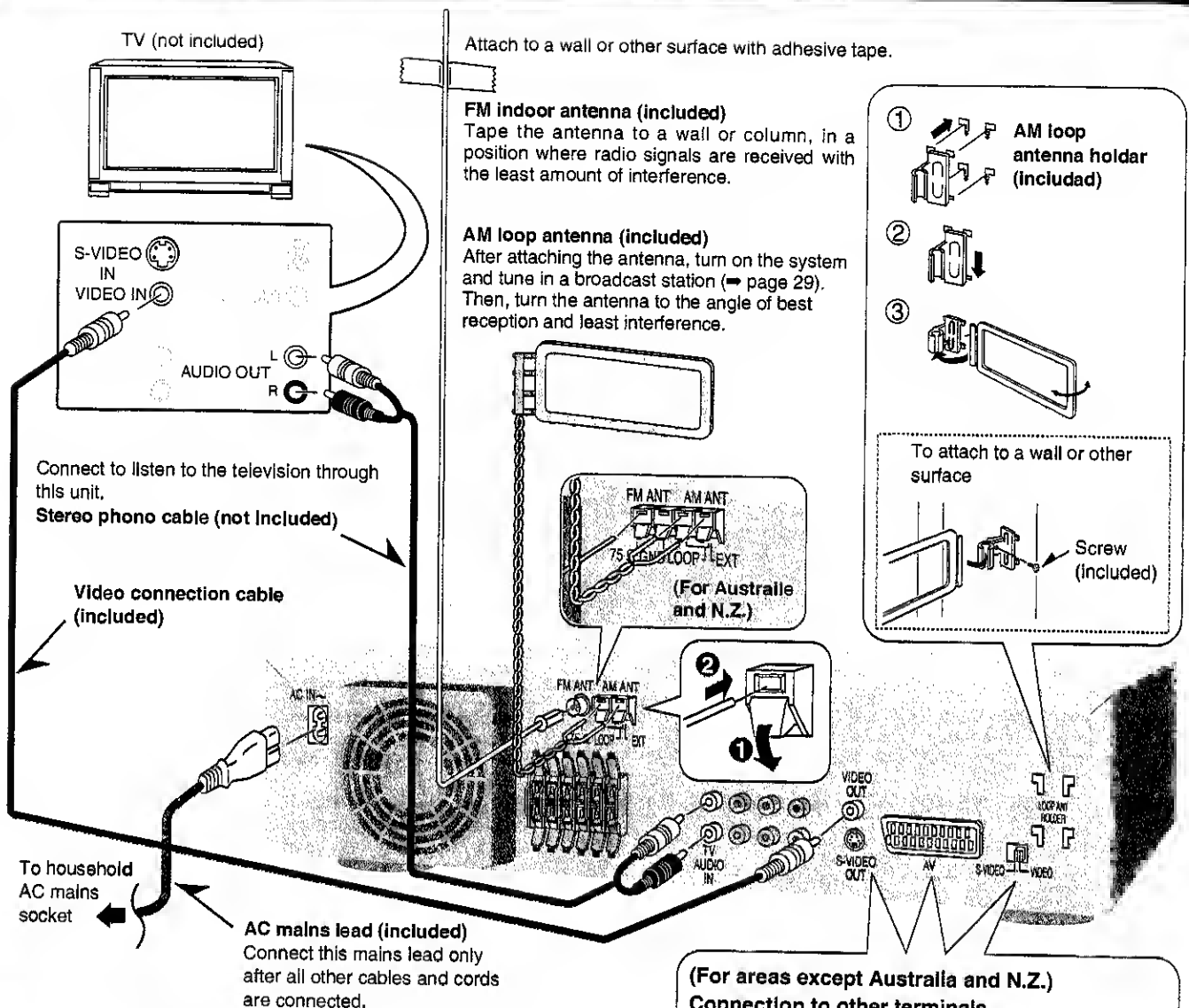
• Use the speakers only with the recommended system. Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire. Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.

• Do not attempt to attach these speakers to walls using methods other than those described in this manual.

Before use

Connections

Connecting the indoor antennas, television, and power



Note

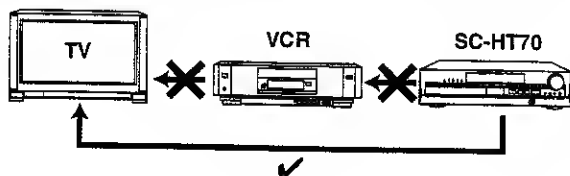
The included AC mains lead is for use with this unit only. Do not use it with other equipment.

(For United Kingdom only)

BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 4 BEFORE CONNECTION.

Note

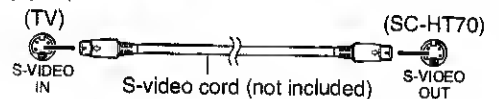
Make video connections from this unit directly to your television. The picture may not be displayed correctly on your television if connections are made through a video deck or a combination TV/VCR due to the copy guard.



(For areas except Australia and N.Z.)

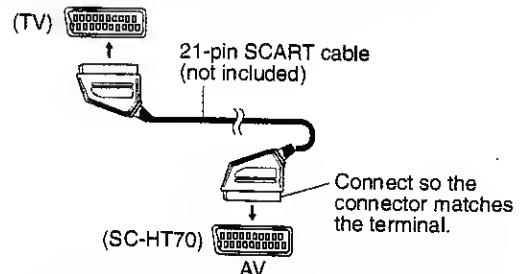
Connection to other terminals

- **S-video terminal**
Enjoy improved video.

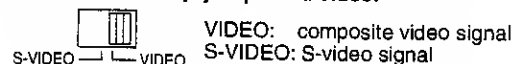


- **21-pin SCART terminal**

Connect to a television with a SCART terminal to send video to the television and receive audio from the television. You do not have to connect a stereo connection cable if you use this connection.

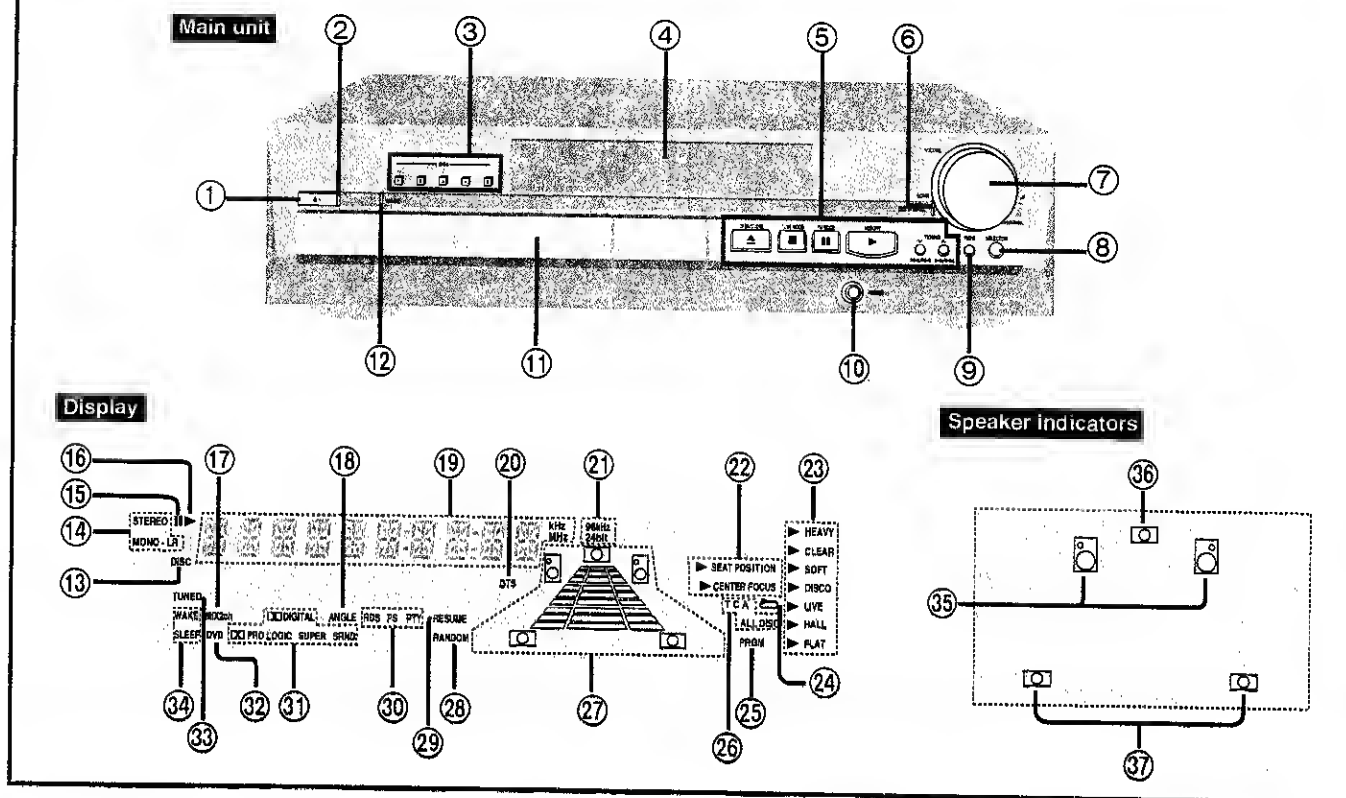


If your television is S-video compatible, use the video switch to enjoy improved video.



Front panel controls

The illustration shows the model for areas except Australia and N.Z.



| No. | Name | Ref. page |
|-----|------|-----------|
|-----|------|-----------|

Main unit

- ① **For Australia and N.Z.**
Standby/on switch (POWER \odot/I)
For areas except Australia and N.Z.
Standby/on switch (\odot/I)
Press to switch the unit from on to standby mode or vice versa.
In standby mode, the unit is still consuming a small amount of power.
- ② **Standby/on indicator**
When the unit is connected to the AC mains supply, this indicator lights red in standby mode and lights green when the unit is turned on.
- ③ **Disc select buttona (DiSC 1-5)** 14
- ④ **Display**
- ⑤ **Basic operation buttona**
- ⑥ **Dolby Digital indicator (DIGITAL)** 32
- ⑦ **Volume control (VOLUME)** 15, 29
- ⑧ **Input select button (SELECTOR)** 14
- ⑨ **For Australia and N.Z.**
Subwoofer level button
(SUBWOOFER LEVEL) 38
For areas except Australia and N.Z.
RDS (radio data system) button (RDS) 29
- ⑩ **Headphones jack (PHONES)** 38
- ⑪ **Disc tray**
- ⑫ **Wake timer indicator (WAKE)** 37

| No. | Name | Ref. page |
|-----|------|-----------|
|-----|------|-----------|

Display

- ⑬ **Disc Indicator**
- ⑭ **Stereo/mono indicator** 29
- ⑮ **Pause (Still picture) indicator** 16
- ⑯ **Play indicator** 15
- ⑰ **MIX 2ch indicator** 34
- ⑱ **Angle indicator** 22
- ⑲ **General display**
- ⑳ **DTS indicator**
Lights when a disc with DTS is loaded.
- ㉑ **DVD disc signal indicator** 15
- ㉒ **Surround effect indicators** 35
- ㉓ **SFC mode indicators** 36
- ㉔ **Repeat indicator** 18
- ㉕ **Program indicator** 25
- ㉖ **Track/Chapter/All disc indicators** 24
- ㉗ **Speaker indicators**
- ㉘ **Random indicator** 23
- ㉙ **Resume indicator** 16
- ㉚ **RDS indicators** 29
- ㉛ **Sound field system indicators** 32, 34
- ㉜ **DVD disc indicator** 15
Lights when DVD is loaded.
- ㉝ **Radio indicator** 29
- ㉞ **Timer indicators** 37

Speaker indicators

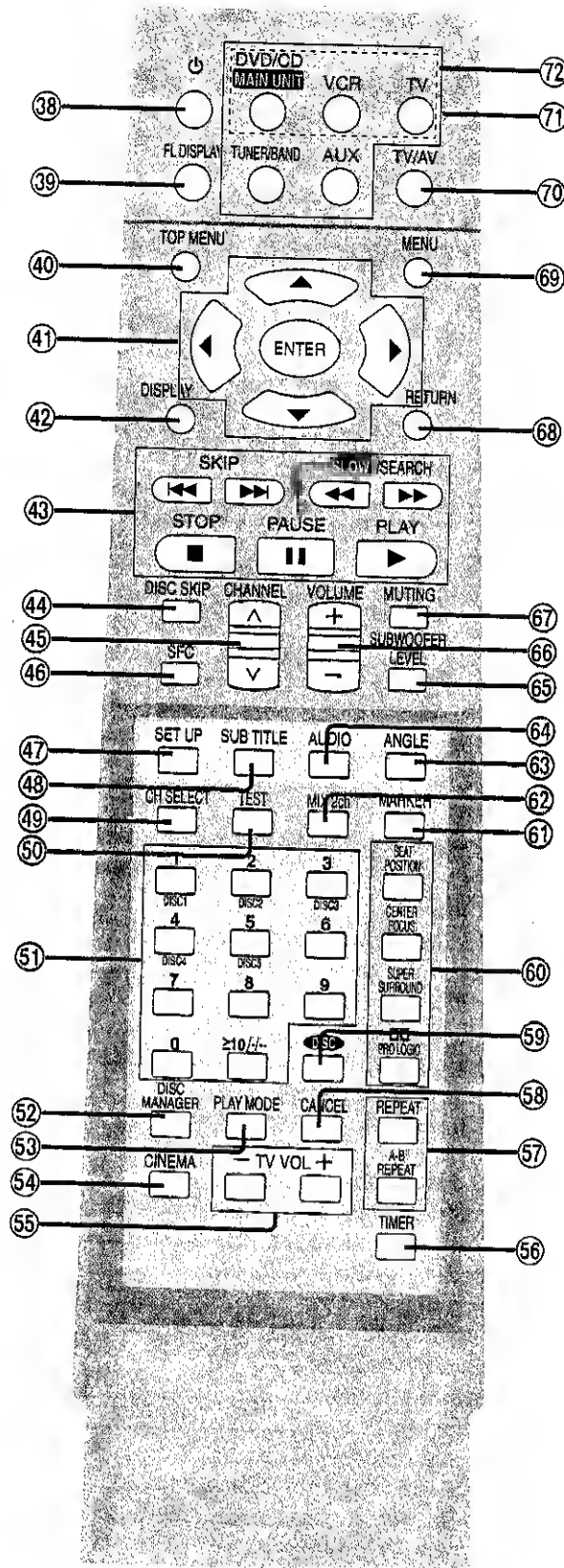
- ㉟ **Front speakers**
- ㊱ **Center speaker**
- ㊲ **Surround speakers**

Lights when sound is actually coming from the speaker.

Before use

Front panel controls

Remote control



| No. | Name | Ref. page |
|-----|---|------------|
| 38 | Standby/on switch (⏻) | |
| 39 | FL display button (FL DISPLAY) | 38 |
| 40 | Top menu button (TOP MENU) | 20 |
| 41 | Cursor and enter buttons | |
| 42 | GUI display button (DISPLAY) | 26 |
| 43 | Basic operation buttons | |
| 44 | Disc skip button (DISC SKIP) | 20 |
| 45 | Channel up/down button (CHANNEL ^, v) | 30, 41 |
| 46 | Sound field control button (SFC) | 36 |
| 47 | Initial settings button (SET UP) | 13, 44 |
| 48 | Subtitle language select button (SUB TITLE) | 22 |
| 49 | Speaker channel select button (CH SELECT) | 33 |
| 50 | Test button (TEST) | 33 |
| 51 | Numbered buttons and ≥10/-/- button (1-9, 0, ≥10/-/-) | |
| 52 | Disc manager button (DISC MANAGER) | 24 |
| 53 | Play mode button (PLAY MODE) | 23, 25 |
| 54 | Cinema button (CINEMA) | 23 |
| 55 | TV volume up/down buttons (- TV VOL +) | 41 |
| 56 | Timer button (TIMER) | 37 |
| 57 | Repeat buttons (REPEAT, A-B REPEAT) | 18 |
| 58 | Cancel button (CANCEL) | 19, 25 |
| 59 | Disc button (DISC) | 14, 23 |
| 60 | Sound field and effect buttons | 32-35 |
| 61 | Marker button (MARKER) | 19 |
| 62 | 2ch down mix button (MIX 2ch) | 34 |
| 63 | Angle button (ANGLE) | 22 |
| 64 | Soundtrack language select button (AUDIO) | 21 |
| 65 | Subwoofer level button (SUBWOOFER LEVEL) | 38 |
| 66 | Volume button (VOLUME +, -) | 33 |
| 67 | Muting button (MUTING) | 38 |
| 68 | Return button (RETURN) | 13, 26, 44 |
| 69 | Menu button (MENU) | 20 |
| 70 | TV/AV select button (TV/AV) | 41 |
| 71 | Input select buttons (AUX, TUNER/BAND, DVD/CD, TV, VCR) | |
| | TUNER/BAND button is also used to switch radio bands. | |
| 72 | Equipment buttons and indicators | 41 |
| | Select the equipment you want to operate. | |
| | Press [DVD/CD] to operate this unit. | |
| | Press [VCR] to operate a video cassette recorder. | |
| | Press [TV] to operate a television. | |
| | These buttons light for a few seconds to indicate that the remote control mode has changed. | |

Selecting TV screen type

Remote control only

Change the setting to suit the aspect ratio of your television.

The menu language is set to English, but you can change it other languages (⇒ Display—Menu Language, page 42).

Preparation

- Turn on the television and switch the video-input mode on the television to suit the connection.

1 Press [DVD/CD] to select “DVD/CD” as the source.
The unit automatically comes on.

2 Press [SET UP] to display the initial settings screen on the television.

3 Press [◀] or [▶] to select the video settings tab.

4 Press [▲] or [▼] to select “TV Aspect” and press [ENTER].

5 Press [▲] or [▼] to select the option and press [ENTER].

• 4:3 Pan&Scan (Factory setting)

Select if you have a regular television and to view 16:9 software* in the pan and scan style (⇒ page 46).



• 4:3 Letterbox

Select if you have a regular television and to view 16:9 software in the letterbox style (⇒ page 46).



• 16:9

Select if you have a widescreen television.

* 16:9 software prohibited from being shown in the pan and scan style will appear in the letterbox style despite the setting here.

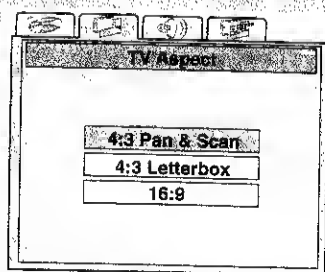
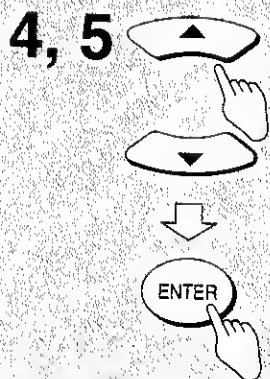
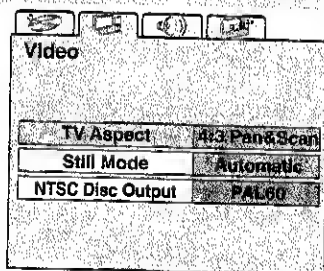
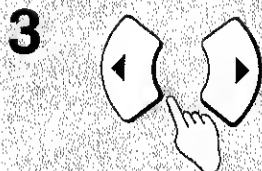
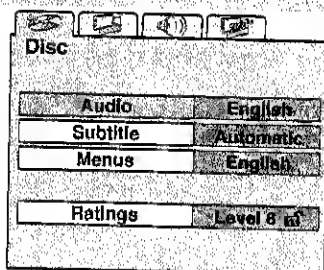
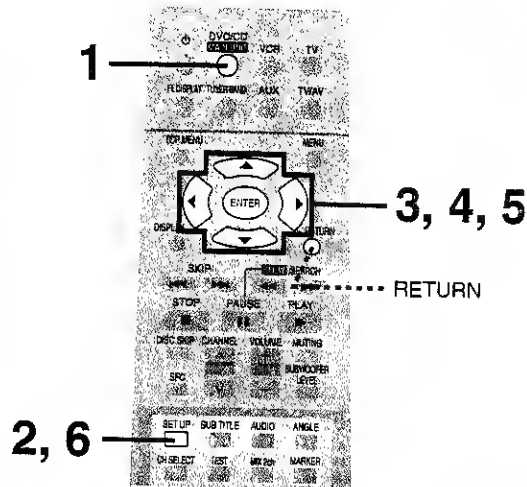
The video settings screen is shown.

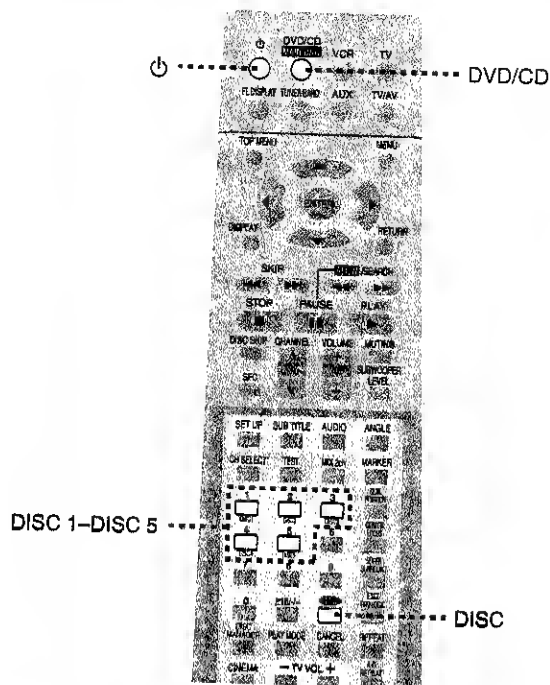
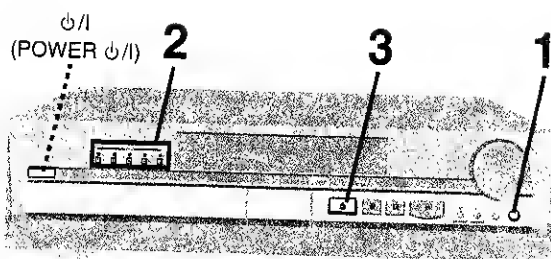
6 Press [SET UP].

To return to the previous screen
Press [RETURN].

For your reference

DVDs are recorded in a variety of aspect ratios. You can change the way software is shown on a regular television (4:3) with the above operation. If you have a widescreen television (16:9), use the television's picture modes (⇒ page 46).





Playing discs

DVD VCD CD

Preparation

- Turn the television on.
- Switch the video input mode on the television to suit the type of connection you have made (e.g., VIDEO 1).
- Press [POWER] to turn the unit on.

1 Press [SELECTOR] to select "DVD/CD" as the source.

The source changes each time you press the button on the main unit.

DVD/CD → FM → AM → TV → VCR → AUX

Remote control: Press [DVD/CD].

2 Press [DISC 1]–[DISC 5] to select a tray.

The indicator lights.

Play starts if a disc is in the tray. (One-touch play)

"NO DISC" is displayed if there is no disc in the tray.

Remote control:

Press [DISC] and then the numbered button corresponding to the required tray.

3 Press [▲ OPEN/CLOSE] to open the tray and insert a disc.

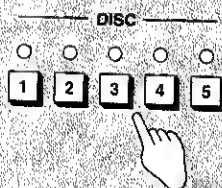
Press again to close and start play. Use this button to open the tray when removing discs.

(Continued on next page)

1 SELECTOR



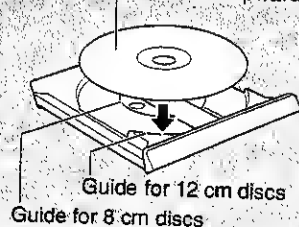
2

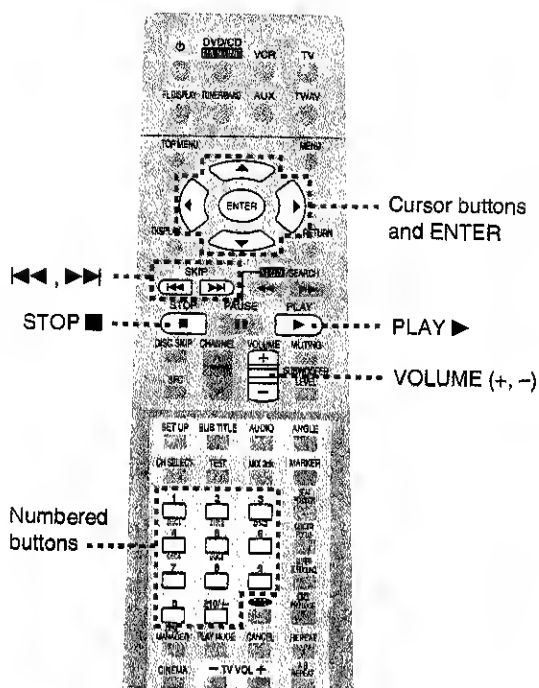
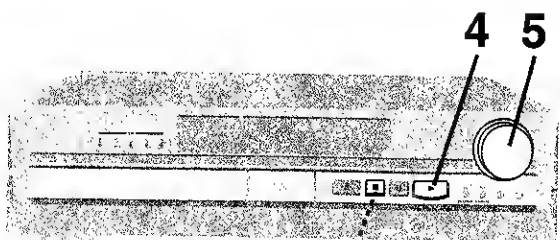


3



Label must face upward.





4



Lights during play.

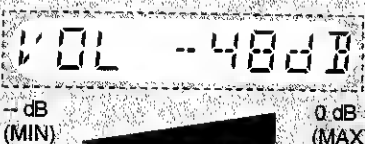
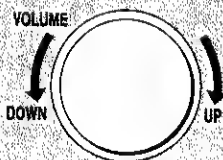
Lights when 96 kHz 24 bit LPCM is detected.



Lights if disc is DVD.

Lights when Dolby Digital is detected.

5



Playing discs

4

If play doesn't start after step 3
Press [▶] to start play.

Remote control: Press [PLAY ▶].

If a menu appears on the television:

- Use the cursor buttons to highlight a title and press [ENTER] on the remote control.
- Use the numbered buttons to select a title.
For 10 or over
To select 10: [≥10/-/-] → [1] → [0]
To select 11: [≥10/-/-] → [1] → [1]

If the menu continues

Press [◀◀] or [▶▶] on the remote control.
Buttons actually used depend on the disc.

Note

Menu items on video CD with playback control (PBC) (→ page 47) can only be selected with the numbered buttons.

5

Adjust the volume.

Remote control: Press [VOLUME (+ or -)].

To stop the discs

Press [■].

Remote control: Press [STOP ■].

Resume function is activated (→ page 16).

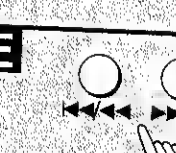
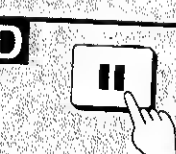
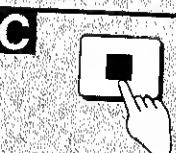
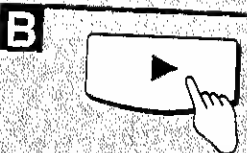
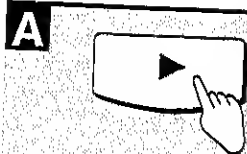
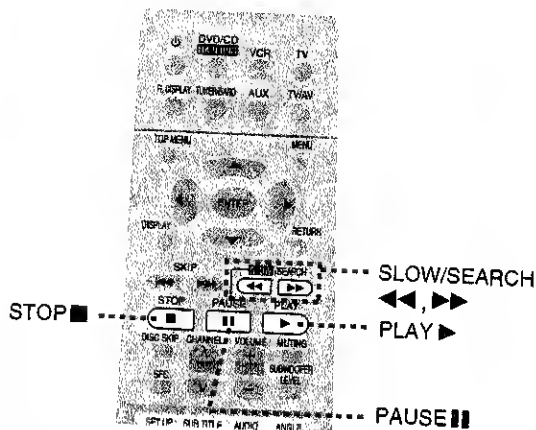
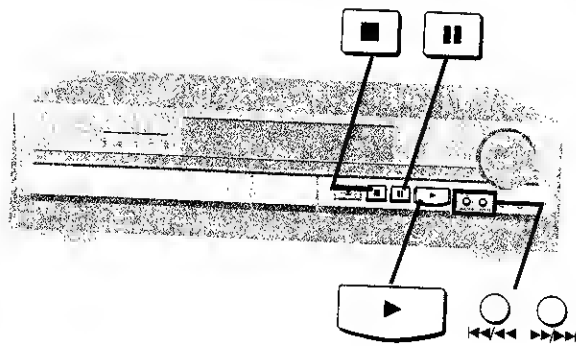
"⊙" appears on the TV

This means the operation is not allowed at that time.

This unit can play CD-DA and video CD format audio CD-R and CD-RW that have been finalized* upon completion of recording.

It may not be able to play some CD-R or CD-RW due to the condition of the recording.

*Finalizing is a process that enables CD-R/CD-RW players to play audio CD-R and CD-RW.



Other methods of play

DVD VCD CD

Using the resume function to restart play

If you press [] or [STOP] during play, the unit remembers the position.

A To restart play from that point
Press [] while "RESUME" is lit.
Remote control: Press [PLAY].

B To review the chapters up to the point where you stopped play (DVD only)
The message "Press PLAY to Chapter Review" appears for a few seconds before the resume function is activated after pressing [].

Press [] while this message is on the screen and the beginning portions of each chapter up to the current one are played.

Remote control: Press [PLAY].
Full play resumes from the point where you stopped play.

C To cancel the resume function
Press [] while "RESUME" is lit.
Remote control: Press [STOP].

Note

- The position is saved even if the unit is turned off.
- Resume is canceled if the disc tray is opened or if you change discs.
- Resume does not work if the disc's play time is not displayed.
- Chapter review is not possible with some DVDs.
- Chapter review may not be activated if you were watching chapter 1.

D Pause (Still picture)

Press [] during play.
Remote control: Press [PAUSE].

To resume play
Press [] or [PLAY].

E Search function

Press and hold [] or [] during play.

The speed increases if you press and hold the button. There are five speeds.

[] : Backward
[] : Forward

Remote control: Press [SLOW/SEARCH (or)].
Each press increases the speed of the search.

To resume play
Press [] or [PLAY].

For your reference

- Sound will be heard at speed one when searching forwards. You can turn this sound off if required (DVD, VCD only).
(= "Audio during Search", page 42)
- Sound will be heard at all speeds when playing audio CDs.
- If pressed while playing a video CD with PBC, you may return to a menu screen.

Other methods of play

A Skip function

DVD VIDEO CD

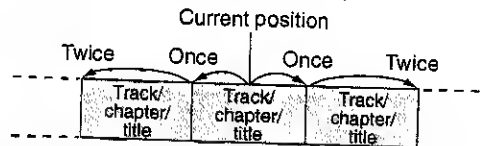
Press [**⏮**] or [**⏭**] to skip tracks (→ page 47) on CDs and Video CDs, and chapters/titles (→ page 47) on DVD video.

Remote control: Press [SKIP ⏮] or [SKIP ⏭].

⏮ : Backward

⏭ : Forward

- Each press increases the number of skips.



- The first skip backwards takes you to the beginning of the current track or chapter/title.

Note

If pressed while a video CD menu is on the screen, you may return to the previous menu.

B Frame-by-frame viewing

Remote control only

DVD VIDEO

While paused

Press the cursor buttons [**⏮**] or [**⏭**].

⏮ : Backward

⏭ : Forward

- The frame changes each time you press a button.
- The frames change in succession if you press and hold the button.
- The frames also advance if you press [**⏮**] on the main unit or [**PAUSE**] on the remote control.

To resume play

Press [**⏭**] or [**PLAY**].

Note

You cannot move backwards with video CD.

C Slow-motion play Remote control only

DVD VIDEO

While paused

Press [**SLOW/SEARCH** (⏮ or ⏭)].

⏮ : Backward

⏭ : Forward

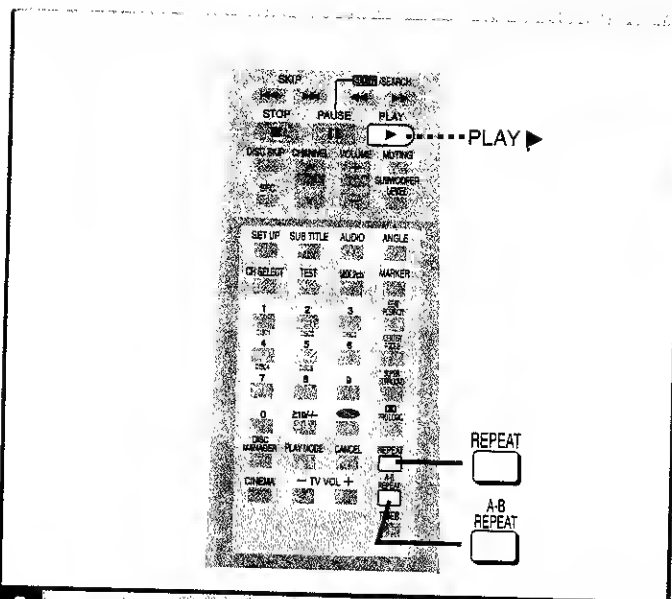
Each press increases the speed of the slow motion. There are five speeds.

To resume play

Press [**⏭**] or [**PLAY**].

Note

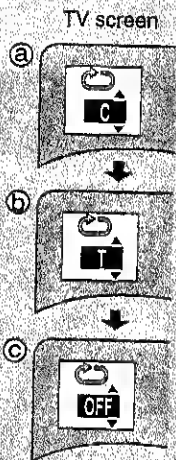
You cannot move backwards with video CD.



A



DVD

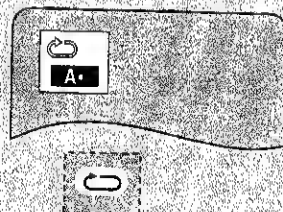


VCD, CD



B

1



2



Other methods of play

Repeat function Remote control only

DVD **CD**

A Repeating chapters, titles, and tracks

Press [REPEAT] during play.

Each time you press the button;

• DVD

- Ⓐ "C" (CHAPTER REPEAT): Chapters repeated.
- Ⓑ "T" (TITLE REPEAT): Titles repeated.
- Ⓒ "OFF" (REPEAT OFF): Repeat mode canceled.

• Video CD/CD

- Ⓓ "A": Repeat entire disc contents.
- Ⓔ Original display: Repeat mode canceled.

To cancel repeat play

Press [REPEAT] until "OFF" appears on the TV or "C" disappears from the unit's display.

Note

Repeat play does not work with some DVDs. It also doesn't work with interactive DVDs and video CDs with playback control.

To repeat only your favorite tracks Video CD and CD only

- ① Program the tracks you want (⇒ page 25).
- ② Press [PLAY ▶].
- ③ Press [REPEAT] to display "A".

B Repeating a specific section (A-B REPEAT)

- 1** Press [A-B REPEAT] during play at the starting point (A).
- 2** Press [A-B REPEAT] at the finishing point (B).

To cancel A-B repeat play

Press [A-B REPEAT] until "A-B" is displayed.

Note

- This feature cannot be used if the play time for the DVD is not displayed.
- The player automatically determines the end of a title or track as point B.
- Subtitles may not appear between A and B.
- A-B repeat is canceled when you stop play.

Other methods of play

A Marking a position Remote control only

DVD  **CD**

This feature allows you to mark a specific point on a disc so you can return to it easily at a later time. There are five markers available.

It only works if the elapsed playing time of the disc you are playing is shown on the unit's display.

1 Press [MARKER] during play.
The marker display appears.

2 Press [ENTER] at the point you want to mark.

To mark another position

3 ① Press [**◀**] or [**▶**] to change markers.
② Press [ENTER].

B Recalling a marked position

1 Press [MARKER].
The marker display appears.

2 Press [◀**] or [**▶**] to highlight the required marker.**

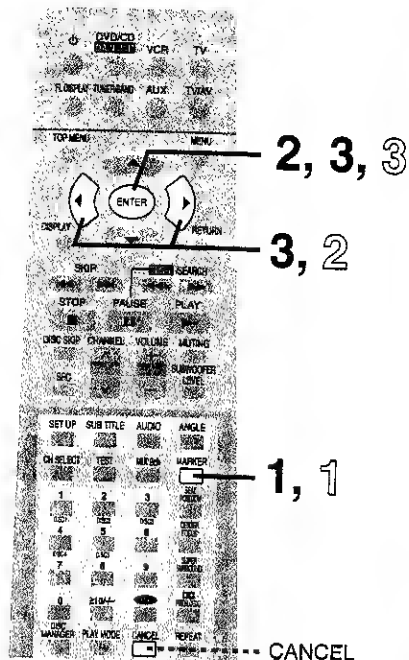
3 Press [ENTER] to recall the position.

To clear a marker

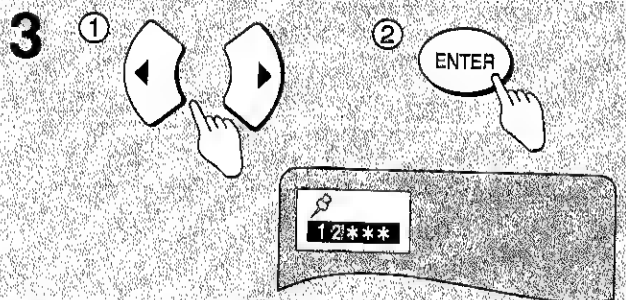
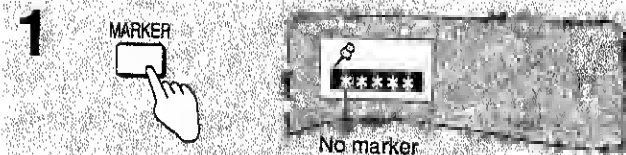
① Press [MARKER].
② Press [**◀**] or [**▶**] to highlight the marker you want to clear and press [CANCEL].

Note

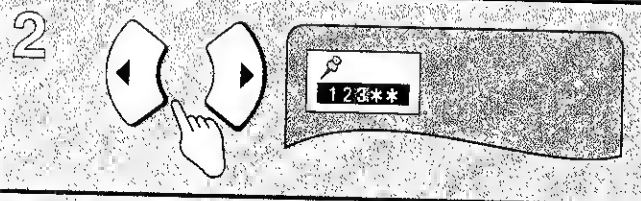
- The markers only work with the current disc.
- This feature can not be used with some DVDs or with video CDs with PBC.
- Some subtitles may fail to appear around the marker (DVD).
- Markers are cleared when the unit is turned off or the disc is removed or changed.

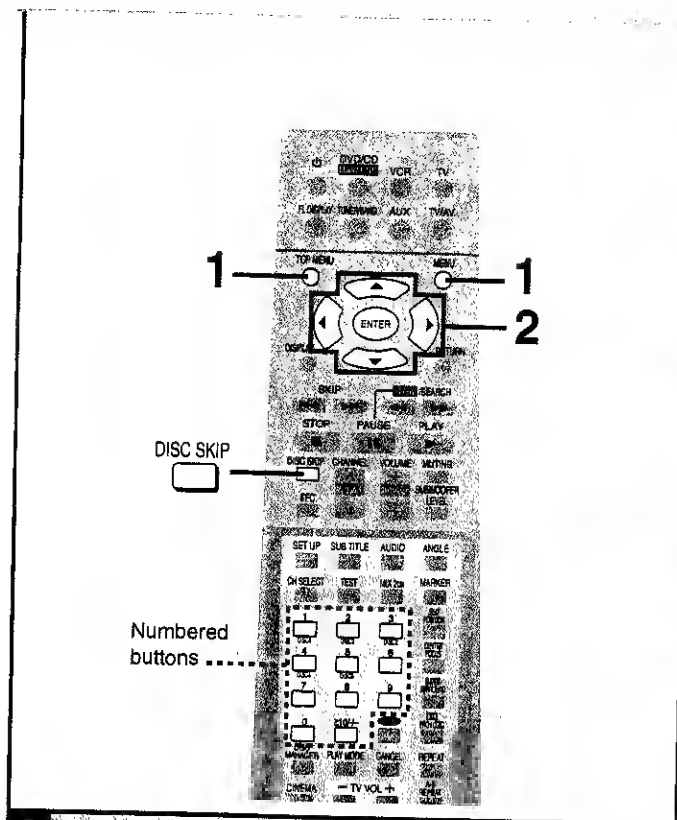


A



B





A

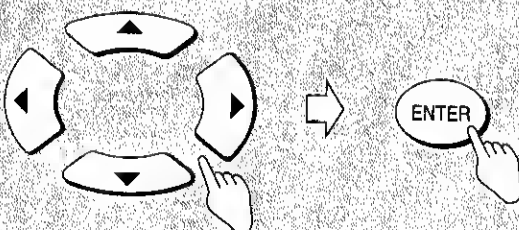


B

1



2



Other methods of play

A Disc skip Remote control only

DVD **CD**

Press [DISC SKIP].

Play starts from the beginning of the disc in the next tray.
You will skip to tray 1 when the current tray is 5.

Note

[DISC SKIP] does not work during program and random play or while the disc manager is on.

B Using menus to play Remote control only

DVD

By calling up menus during play, you can start from a specific title or chapter.

Menu content depends on the disc. These operating instructions describe the basic steps.

1 Press [TOP MENU] or [MENU].

A menu screen is displayed.

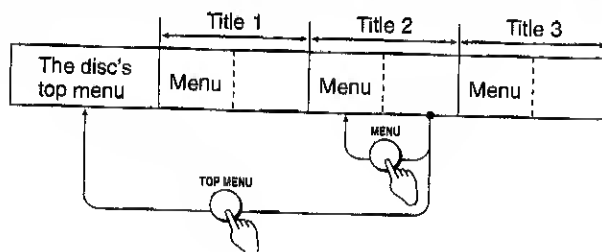
(Press again to return to what you were watching with some discs.)

2 Select an item with the cursor buttons and press [ENTER] to confirm the selection.

You can select items with the numbered buttons with some discs.

Repeat it when another menu is shown.

DVDs can have several menus. The menu displayed by pressing [TOP MENU] may be different to the menu displayed by pressing [MENU].



Other methods of play

A Changing soundtracks

Remote control only

DVD

Some DVDs have more than one soundtrack recorded on them, such as multiple languages, and you can change soundtracks during play.

Press [AUDIO] during play.

The soundtrack display appears.

The number changes each time you press the button.

The number can also be changed with the cursor buttons (▲ or ▼) or the numbered buttons.

See page 27 for a key to language abbreviations.

Note

- You can only select languages or sound formats if they have been recorded on the disc you are playing.
- You can also make language settings before play with the Audio menu (→ page 42). (Some discs are designed to start in a certain language despite any changes you make to the unit's menus.)
- Some discs allow changes to soundtracks only by using the disc's menus.
- "—" or "—" is displayed instead of the language number in circumstances such as when no language is recorded on the disc.

B Using this feature with karaoke discs

You can do the following with karaoke discs.

While playing a karaoke disc

- ① Press [AUDIO].
- ② Press the cursor buttons [◀], [▶] to highlight the illustrated icon.
- ③ Press the cursor buttons [▲], [▼] to turn the vocals on or off.

DVD karaoke disc (Solo)

OFF: Vocal OFF

ON: Vocal ON

DVD karaoke disc (Duet)

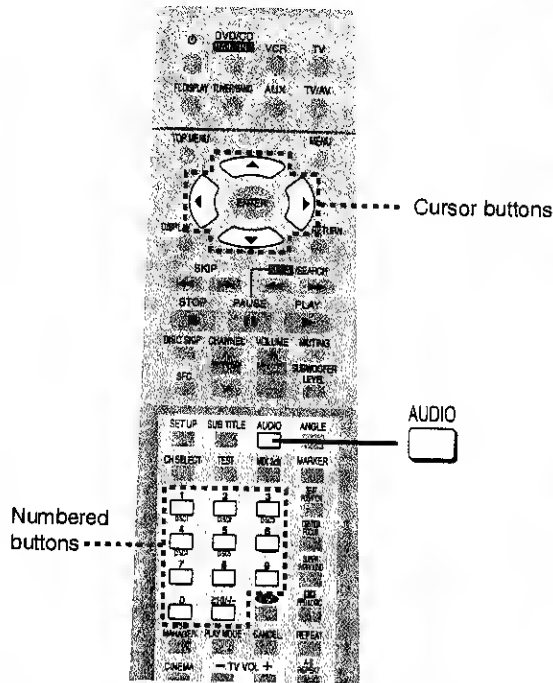
OFF: Vocal OFF

V1+V2: Vocal 1, 2 ON

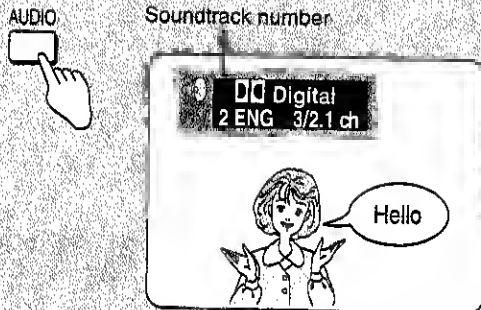
V1: Vocal 1 only ON

V2: Vocal 2 only ON

Actual displays depend on the disc.

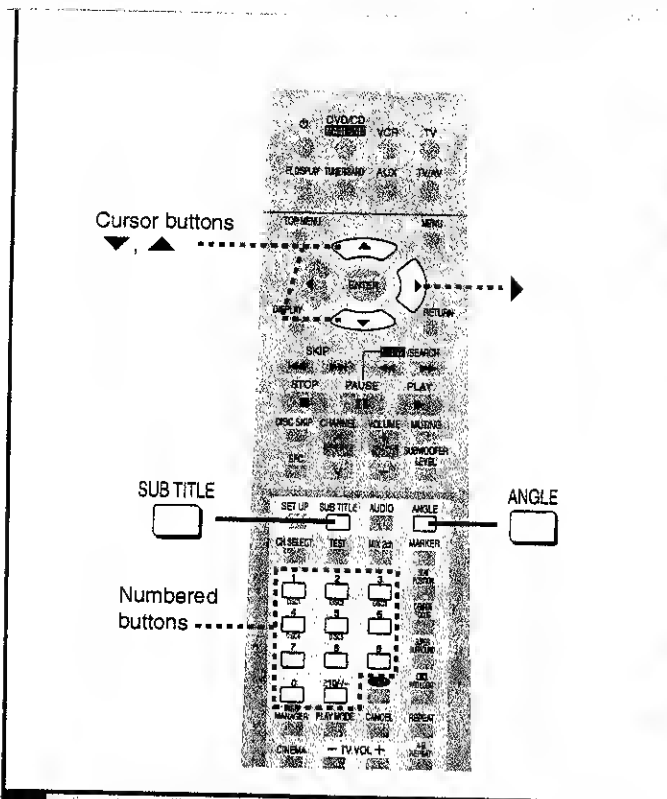


A

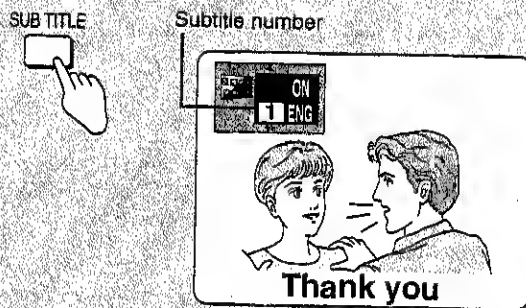


B

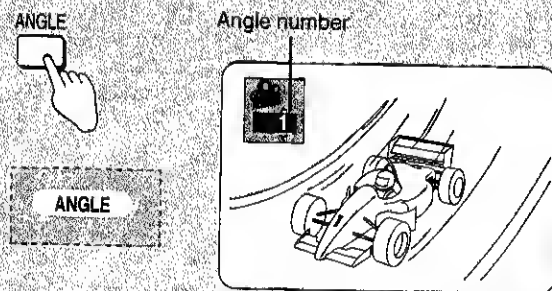




A



B



Other methods of play

A

Changing subtitle language

Remote control only

DVD

Some DVDs have more than one subtitle language recorded on them, and you can change language during play.

Press [SUB TITLE] during play.

The subtitle display appears.

The number changes each time you press the button.

The number can also be changed with the cursor buttons (▲ or ▼) or the numbered buttons.

See page 27 for a key to language abbreviations.

To clear/display the subtitles

1. Press [SUB TITLE].
2. Press [▶].
3. Press [▲] or [▼] to select "ON" or "OFF".

Note

- There may be a slight delay before subtitles are shown.
- You can only select languages if they have been recorded on the disc you are playing.
- You can also make language settings before play with the Subtitle menu (→ page 42). (Some discs are designed to start in a certain language despite any changes you make to the unit's menus.)
- Some discs allow changes to subtitle languages only by using the disc's menus.
- "—" or "—" is displayed instead of the language number in circumstances such as when no language is recorded on the disc.

B

Switching angles

Remote control only

DVD

Some DVDs allow you to view the same scene from different angles.

Press [ANGLE] during play.

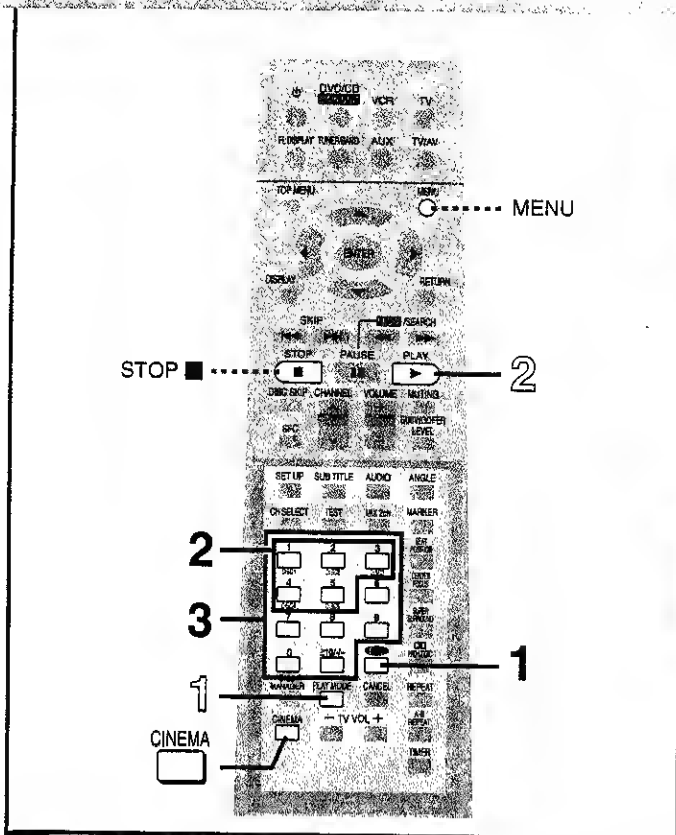
The angle display appears.

The number changes each time you press the button.

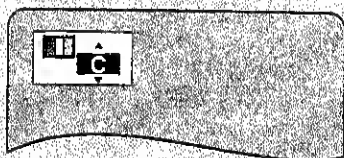
The number can also be changed with the cursor buttons (▲ or ▼) or the numbered buttons.

Note

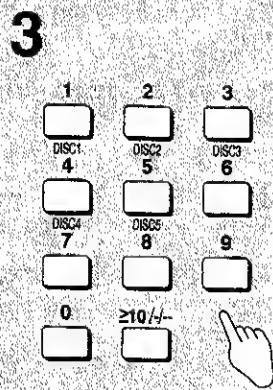
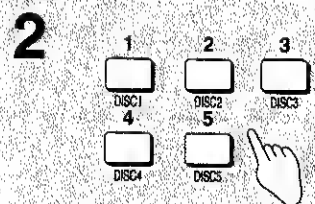
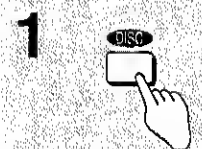
- "ANGLE" lights up on the unit's display during scenes with multiple angles recorded to indicate this feature is available.
- Some discs allow you to set angles before multi-angle scenes are played. Read the instructions that come with the DVD.
- Some discs allow changes to angles only by using the disc's menus.



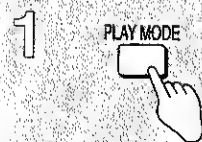
A



B



C



Other methods of play

A Changing the picture quality for movie viewing (Cinema mode)

Remote control only

DVD

You can enjoy better pictures by changing the picture quality.

Press [CINEMA].

The cinema display appears on the screen.

Each time you press the button;

C (on) → N (off)

B Starting play from a specific track

Remote control only

VCD **CD**

1 Press [DISC].

2 Press [DISC 1]–[DISC 5] to select a disc.

3 Wait for the disc to change and play to start Press the numbered buttons to select the track.

For tracks numbered 10 or over, press [≥10/–/–] then the two digits.

Track no. 10: [≥10/–/–] → [1] → [0]

Track no. 25: [≥10/–/–] → [2] → [5]

Note

- When playing video CDs with PBC, stop the disc then press [STOP ■] again to cancel playback control, then select the track number. To restore playback control, stop the disc and press [MENU].
- There are some video CDs with PBC where this will not work.

C Random play Remote control only

CD

This mode randomly plays the tracks on the current disc or all loaded discs once each.

1 While stopped Press [PLAY MODE] to select "RANDOM" or "RANDOM ALL DISC".

Each time you press the button;

PRGM → RANDOM → RANDOM ALL DISC → (off)

PRGM: Program play (→ page 25)

RANDOM: Randomly plays the tracks on the current disc.

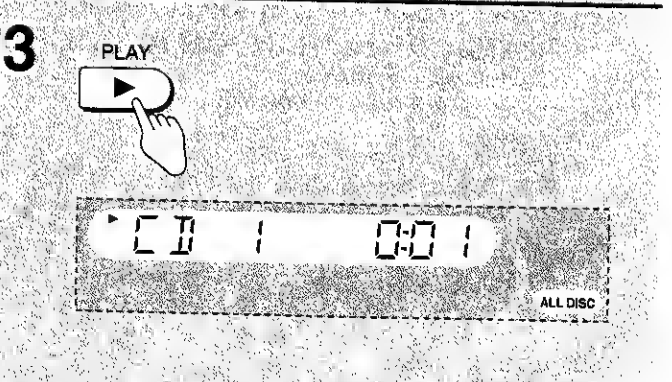
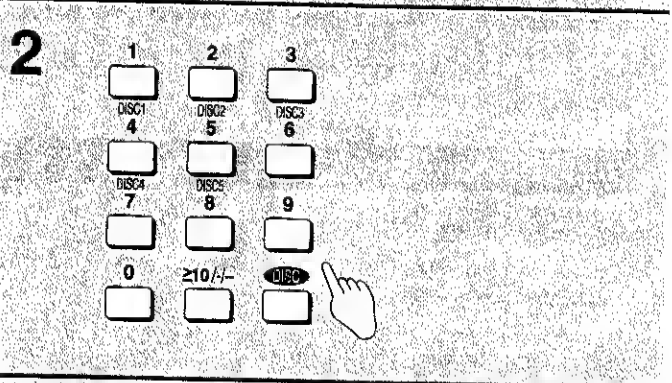
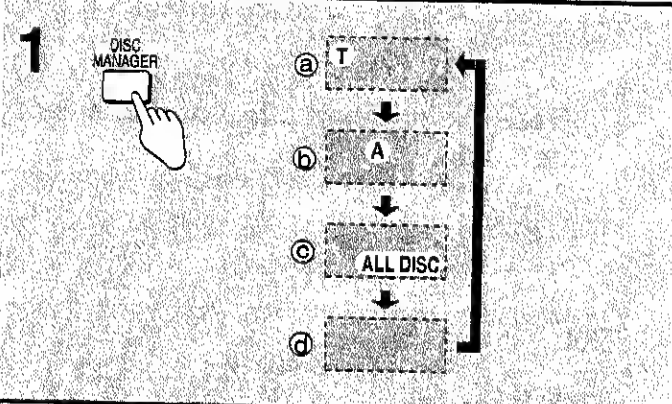
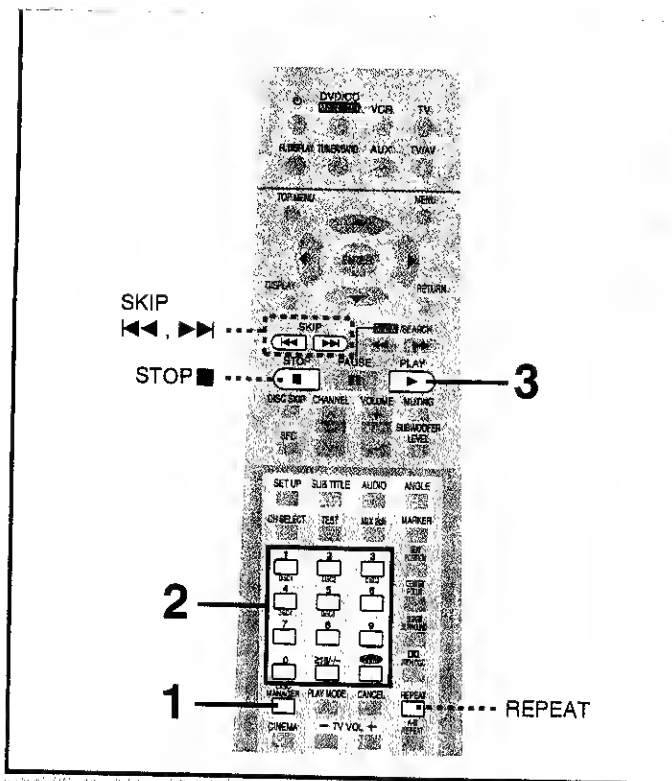
RANDOM ALL DISC: Randomly plays the tracks on all discs.

2 Press [PLAY ▶].

To stop

Press [STOP ■].

Random play is also canceled.



Other methods of play

Using the Disc Manager

Remote control only



The disc manager allows you to choose one track or disc to play or to play all five discs in succession.

- 1 While stopped
Press [DISC MANAGER] to select the desired method.

Each time you press the button;

- Ⓐ (1-TRACK): One track play
- Ⓑ (1-DISC): Plays one disc.
- Ⓒ (ALL-DISC): Plays five discs in succession.
- Ⓓ (NORMAL): Normal play (Off)

- 2 **Select the disc and track.**

When selecting a disc

Press [DISC] and [DISC 1]–[DISC 5].

When selecting a track

Press the numbered buttons.

For tracks numbered 10 or over, press [≥10/—] then the two digits.

Track no. 10: [≥10/—] → [1] → [0]

Track no. 25: [≥10/—] → [2] → [5]

You can also select the track by pressing [SKIP ◀▶] and [SKIP ▶▶].

- 3 **Press [PLAY ▶].**

To cancel disc manager

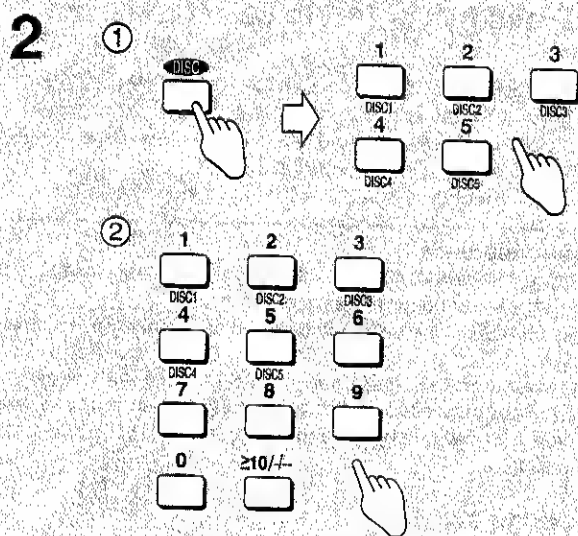
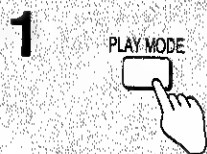
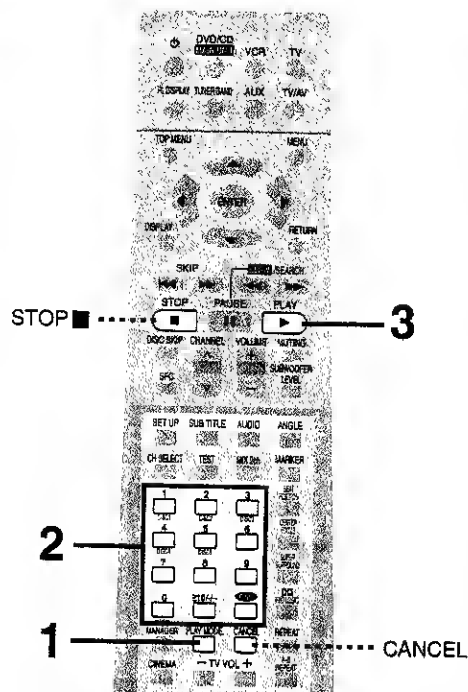
Press [STOP ■].

To play a track or disc repeatedly

Press [REPEAT] during disc manager play.

Note

- You cannot use the disc manager while "RANDOM" or "PRGM" are on.
- When playing video CDs with playback control in the "A" or "ALL DISC" mode, you can play the disc without having to operate the disc's menus.
- The disc manager skips any DVDs that are loaded.



Disc number Track number Programmed order



Other methods of play

Program play Remote control only



You can select up to 24 tracks to play in the order you choose.

- 1** While stopped
Press **[PLAY MODE]** to select **"PRGM"**.

Each time you press the button;
PRGM → RANDOM → RANDOM ALL DISC → (off)

- 2** ① Select the disc by pressing **[DISC]** and **[DISC 1]–[DISC 5]**.

- ② Press the numbered buttons to select a track.

For tracks numbered 10 or over, press $[\geq 10/- -]$ then the two digits.

Track no. 10: $[\geq 10/- -] \rightarrow [1] \rightarrow [0]$

Track no. 25: $[\geq 10/- -] \rightarrow [2] \rightarrow [5]$

Repeat these steps to program up to 24 tracks.

Step ① is unnecessary when programming tracks on the same disc.

- 3** Press **[PLAY ►]**.

To cancel program play

After stopping play, press **[PLAY MODE]** so "PRGM" goes out. The program contents are saved.

You can play the same program again if you press **[PLAY MODE]** so "PRGM" comes on.

To clear the last track

While stopped (Press **[STOP ■]** to cancel the resume function if it is on.)

Press **[CANCEL]**.

To clear the whole program

While stopped (Press **[STOP ■]** to cancel the resume function if it is on.)

Press **[STOP ■]** so "PRGM" goes out. "CLEAR" is displayed to indicate the program is cleared. If "CLEAR" is not displayed, start and stop play, then press **[STOP ■]** again.

Note

- Discs and tracks the unit cannot find can be programmed but are canceled during play. This is also the case if you program DVD.
- The program mode is canceled (normal play mode is restored) when you turn the unit off, open the disc tray, or change the input source, but the program contents are saved.

Using GUI screens

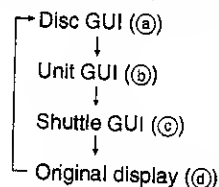
Remote control only

DVD

GUI (Graphic User Interface) are icons that contain information about the disc or unit. These icons allow you to perform operations by changing this information.

1 Press [DISPLAY].

Each time you press the button;



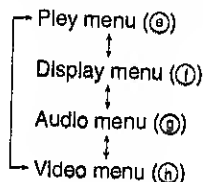
Actual GUI depend on the disc contents.

2 [Unit GUI] only

While the leftmost icon is highlighted

Press [▲] or [▼] to select the menu.

Each time you press the button;



3 Press [◀] or [▶] to select the item.

4 Press [▲] or [▼] to select the setting.

Items with "▲" or "▼" above and below can be changed by [▲], [▼]. Other items use different buttons. See pages 27 and 28 for details.

For your reference

- Some functions cannot be accessed from the stop mode (e.g. changing the soundtrack language).
- Press [ENTER] if the setting does not change after pressing [▲], [▼].
- When numbers are displayed (e.g. title No.), the numbered buttons are also effective for the setting. When numbers are entered with the numbered buttons, press [ENTER] to register the setting.

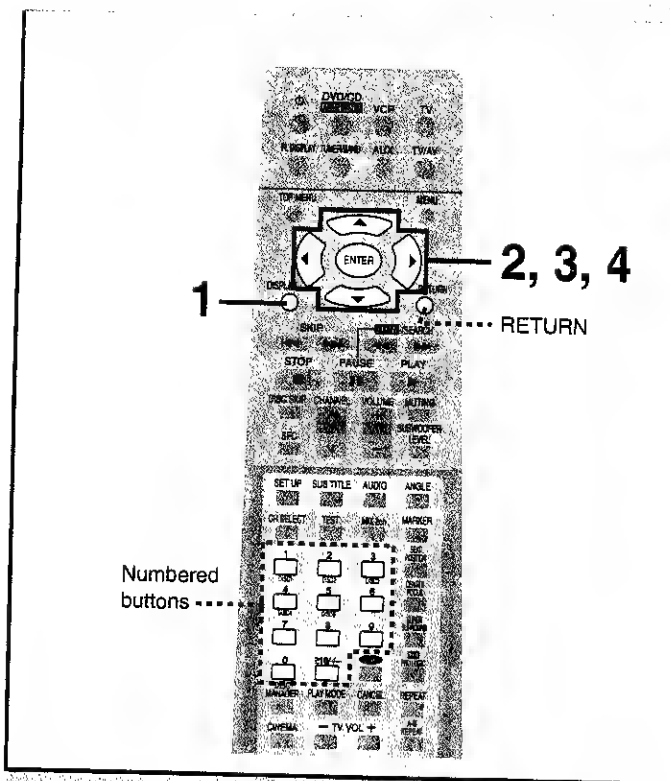
To clear the GUI

Press [RETURN] until the GUI are cleared.

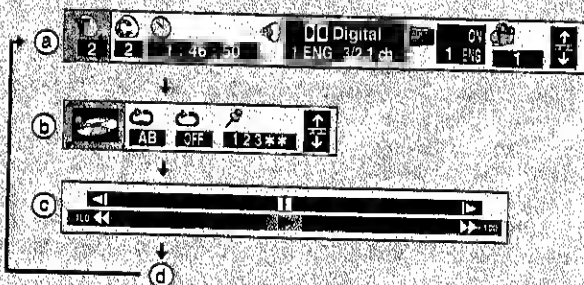
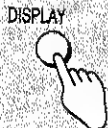
To change the position of the icons

You can lower the position of the icons on the screen if they are cut off for some reason.

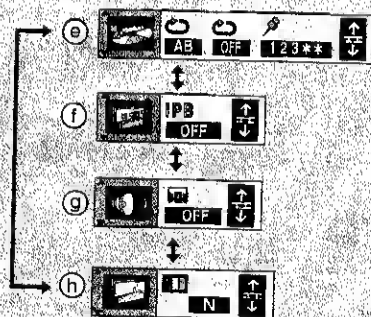
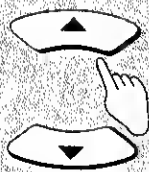
1. Press [◀], [▶] to select the rightmost icon.
2. Press [▲], [▼] to move the icon.



1



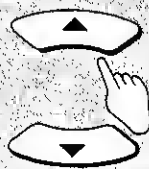
2



3






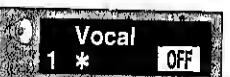





4



GUI icon descriptions

Disc GUI

| Icon | Content |
|---|---|
|  | Title number |
|  | Chapter number |
|  | Time (Select a position to start play by specifying a time with the numbered buttons.) |
|  | Soundtrack language (See A at right for language abbreviations.) |
|  | Audio signal type (See B at right for details.) |
|  | (Karaoke DVD only) Karaoke vocal on/off Solo: OFF or ON Duet: OFF, V1 + V2, V1 or V2 |
|  | Subtitle language (See A at right for language abbreviations.) |
|  | Subtitles on/off ON → OFF |
|  | Angle number |

A Audio/Subtitle language

| | | |
|--------------|-----------------|-----------------|
| ENG: English | SVE: Swedish | CHI: Chinese |
| FRA: French | NOR: Norwegian | KOR: Korean |
| DEU: German | DAN: Danish | MAL: Malay |
| ITA: Italian | POR: Portuguese | VIE: Vietnamese |
| ESP: Spanish | RUS: Russian | THA: Thai |
| NLD: Dutch | JPN: Japanese | *: Others |

B Signal type/data

LPCM/DD Digital: Signal type
 k (kHz): Sampling frequency
 b (bit): Number of bits
 ch (channel): Number of channels

Example:

3/2.1ch

1: Subwoofer signal
(not displayed if there is no subwoofer signal)

0: No surround
 1: Mono surround
 2: Stereo surround (left/right)

1: Center
 2: Front left + Front right
 3: Front left + Front right + Center

GUI icon descriptions

Unit GUI

Play menu



| Icon | Content |
|------|--|
| | A-B repeat (⇒ page 18) [ENTER] (start point) → [ENTER] (finish point) To cancel [ENTER] |
| | Repeat play (⇒ page 18) C (Chapter) ↔ T (Title) ↔ OFF |
| | Marker (⇒ page 19) [ENTER] so the unit is ready to accept marka. To mark a position [ENTER] (at the desired point) To mark another position [◀], [▶] → [ENTER] To recall a marker [◀], [▶] → [ENTER] To erase a marker [◀], [▶] → [CANCEL] |

Display menu



| Icon | Content |
|------|--|
| | IPB display (⇒ page 47) Displays the picture type (I/P/B) in the still picture mode. ON ↔ OFF |

Audio menu



| Icon | Content |
|------|---|
| | (Dolby Digital, 3-channel or over only) Dialogue Enhancer Makes the dialogue in movies easier to hear. ON ↔ OFF (Actual results depend on the disc.) |

Video menu



| Icon | Content |
|------|--|
| | Cinema mode (⇒ page 23) C: Cinema mode N: Normal mode |

Shuttle GUI

| Icon | Content |
|------|--|
| | Pause |
| | Slow-motion play ◀: Backward ▶: Forward |
| | Play |
| | Search ◀◀: Backward ▶▶: Forward |

There are five speeds for both backward and forward slow-motion and search.

The radio: manual tuning

Preparation

- Press [POWER ϕ /I] to turn the unit on.

1 Press [SELECTOR] to select "FM" or "AM".

Each time you press the button;

DVD/CD \rightarrow FM \rightarrow AM \rightarrow TV \rightarrow VCR \rightarrow AUX

2 Press [TUNE MODE] to select "MANUAL".

Each time you press the button; MANUAL \leftrightarrow PRESET

3 Press [TUNING (∇ or \blacktriangle)] to select the frequency of the required station.

"TUNED" is displayed when a radio station is tuned.

"STEREO" is displayed when a stereo FM broadcast is being received.

4 Adjust the volume.

Auto tuning

Press and hold [TUNING (∇ or \blacktriangle)] for a moment until the frequency starts changing rapidly. The unit begins auto tuning, stopping when it finds a station.

Note

Tuning may stop before a station is found if interference is encountered.

A If noise is excessive in FM

Press [FM MODE] to display "MONO".

- This mode improves sound quality if reception is weak for some reason, but broadcasts are heard in monaural.
- Turn "MONO" off for normal listening. (Press [FM MODE] again.)

B (For areas except Australia and N.Z.) RDS broadcasting

This unit can display the text data transmitted by the radio data system (RDS) available in some areas.

If the station you are listening to is transmitting RDS signals, "RDS" will light up on the display.

Press [RDS] to display the text data.

Each time you press the button;

Frequency display \rightarrow PS display \rightarrow PTY display

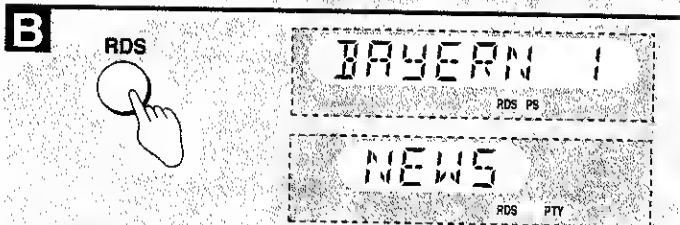
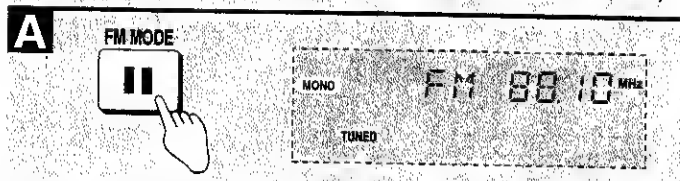
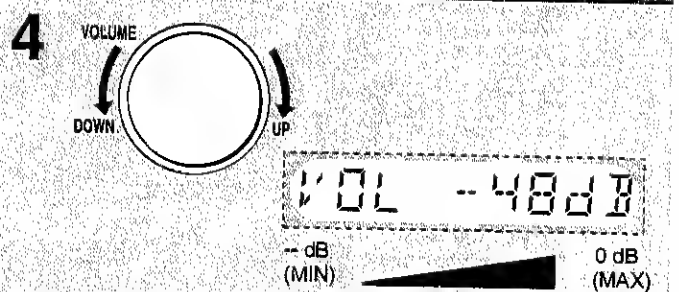
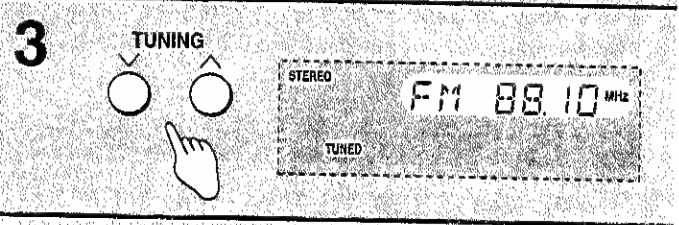
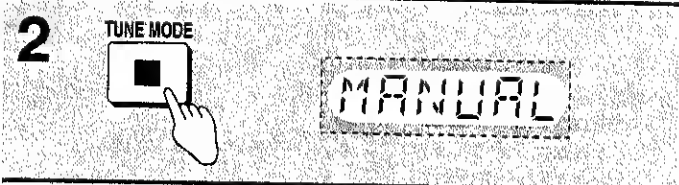
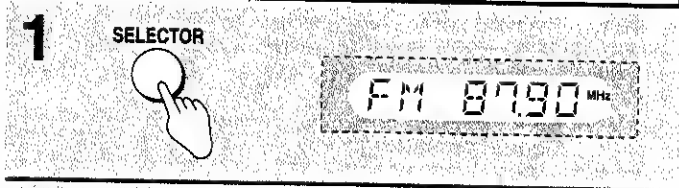
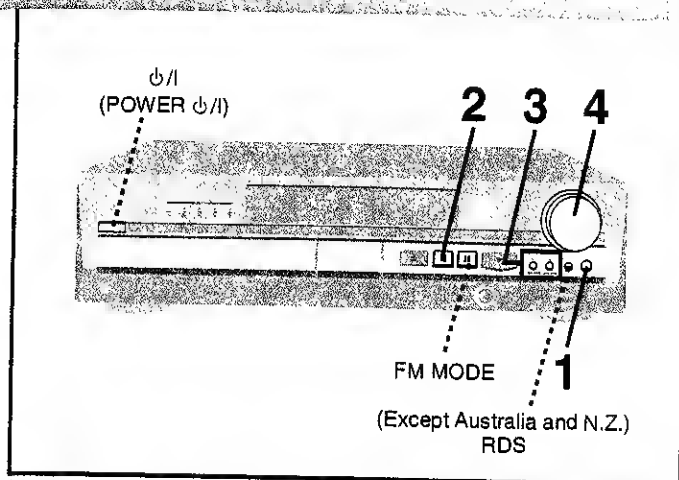
PS display: A station name is displayed.

PTY display: A program type is displayed.

Note

- RDS displays may not be available if reception is poor.
- [RDS] is [SUBWOOFER LEVEL] (\Rightarrow page 38) on the model for Australia and N.Z..

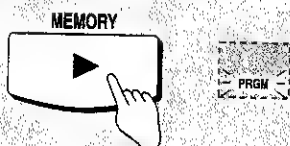
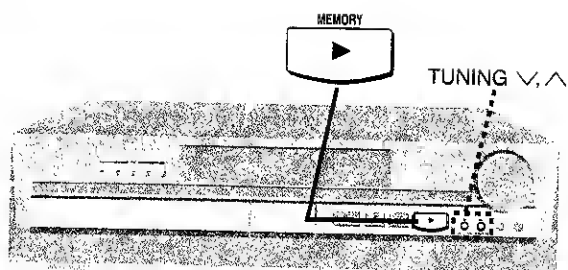
*"M.O.R. M" = "Middle of the road music".



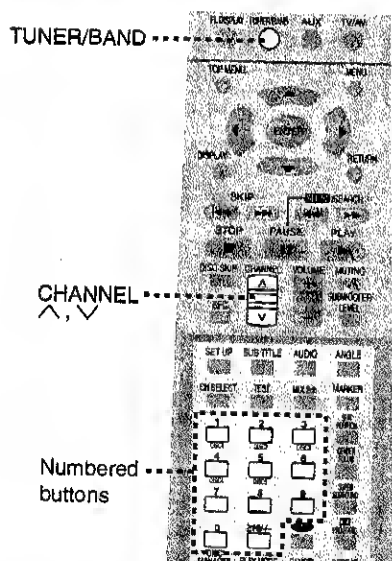
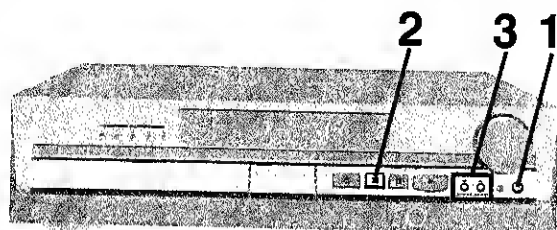
PTY displays

| | | | |
|---------|-----------|----------|----------|
| NEWS | VARIED | FINANCE | COUNTRY |
| AFFAIRS | POP M | CHILDREN | NATIONAL |
| INFO | ROCK M | SOCIAL A | OLDIES |
| SPORT | M.O.R. M* | RELIGION | FOLK M |
| EDUCATE | LIGHT M | PHONE IN | DOCUMENT |
| DRAMA | CLASSICS | TRAVEL | TEST |
| CULTURE | OTHER M | LEISURE | ALARM |
| SCIENCE | WEATHER | JAZZ | |

A



B



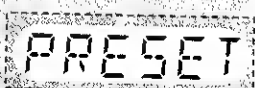
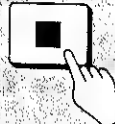
1

SELECTOR



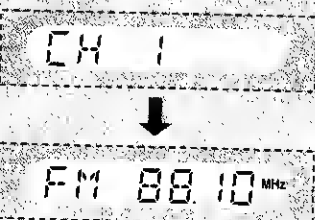
2

TUNE MODE



3

TUNING



The radio: preset tuning

- Tuning is simpler if you preset stations.
 - You can preset 12 FM and 12 AM stations.
- Choose either automatic tuning, which presets all the stations the tuner can receive, or manual presetting, which allows you to select the stations to preset and the order they are to be preset in.

A Automatic presetting

Do the following once each for FM and AM.

Preparation

Tune to the frequency where presetting is to begin (= page 29).

Press and hold [MEMORY].

Release the button when the frequency begins to change. The stations are preset into the channels in ascending order. The last station to be preset is played when presetting is complete.

Manual presetting

Preset the stations one at a time.

- ① Press [MEMORY].
- ② Tune to the required frequency.
- ③ Press [MEMORY].
- ④ Press [TUNING (V or ^)] to select a channel.
- ⑤ Press [MEMORY].

The station occupying a channel is erased if another station is preset in that channel.

B Selecting channels

- 1 Press [SELECTOR] to select "FM" or "AM".**

Each time you press the button;

DVD/CD → FM → AM → TV → VCR → AUX

- 2 Press [TUNE MODE] to select "PRESET".**

Each time you press the button; MANUAL ↔ PRESET



- 3 Press [TUNING (V or ^)] to select preset channel.**

On the remote control

- ① Press [TUNER/BAND] to select "FM" or "AM".
 - ② Press the numbered buttons to select the channel.
- For channels 10, 11, and 12, press [≥10/--] then the two digits.
- 10 ch: [≥10/--] → [1] → [0]
11 ch: [≥10/--] → [1] → [1]
Or
Press [CHANNEL (V or ^)] to select a channel.

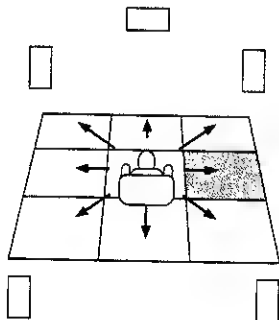
Sound field

Sound field systems and effects you can enjoy with this unit

| Sound field system | Features | Software | Other effects |
|---|---|--|---------------------------------------|
| Dolby Digital (= page 32) | <p>Dolby Digital is a discrete 5.1 channel surround system developed for cinema use.</p> <p>This unit automatically recognizes DVDs that have been recorded with Dolby Digital.</p> <p>Not all Dolby Digital sources are recorded with 5.1 channels. Some sources marked Dolby Digital may be recorded in Dolby Surround, a 2 channel system.</p> |  <p>Software encoded with Dolby Digital can be identified with this mark.</p> <ul style="list-style-type: none"> • DVD | (A) Seat position (B) Center focus |
| Dolby Pro Logic (= page 32) | <p>Dolby Pro Logic is a decoding system that was developed to get a better sense of presence from sources encoded with Dolby Surround. The feeling of position has been improved by the addition of a separate center speaker channel.</p> |  <p>Software encoded with Dolby Surround can be identified with this mark.</p> <ul style="list-style-type: none"> • DVD • Video tape • CD • Video CD | (A) Seat position (B) Center focus |
| SUPER SURROUND (= page 34) | <p>MOVIE</p> <p>This mode adds surround effects to movie software that hasn't been recorded with the above systems.</p> <p>MUSIC</p> <p>This mode adds surround effects to stereo sources.</p> | <p>Any stereo sound source except for the radio.</p> | (A) Seat position — |
| SFC (Sound Field Control) (= page 36) | <p>Use SFC effects to change the sound quality and add reverberation.</p> | <p>Any source.</p> | — |

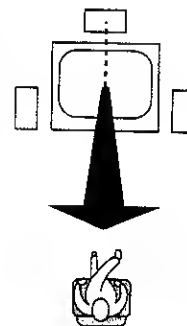
(A) Seat position (= page 35)

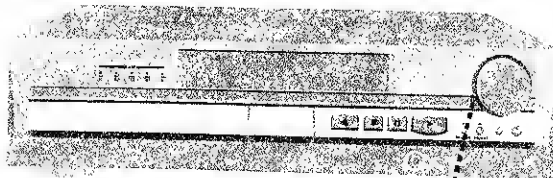
- This mode helps maintain the sound position even if the listening position itself is changed.



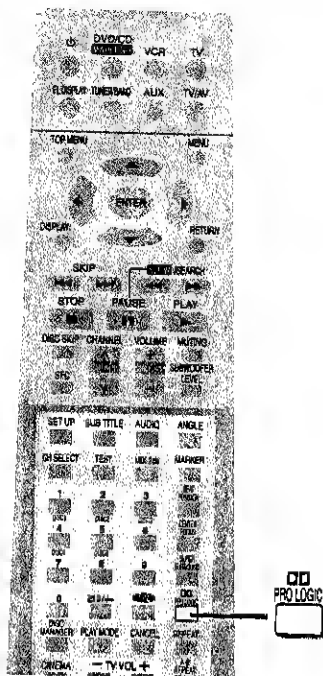
(B) Center focus (= page 35)

- This mode makes it seem like the sound from the center speaker is coming from within the television. You can select one of two levels.
- The center speaker should be placed above the television.





DIGITAL

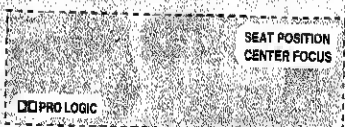


PRO LOGIC

A



B



Sound field

A Enjoying sound with Dolby Digital

DVD

Playback the source (DVD).

Enjoy a powerful home-theater experience.

"**DIGITAL**" and **DIGITAL** indicator light when Dolby Digital signals are detected.

Note

- If the disc contains multiple audio formats (Dolby Digital and DTS, for example) select the soundtrack recorded with Dolby Digital (→ page 21).
- You can adjust the output level of the speakers if necessary (→ page 33).

B

Enjoying sound with Dolby Pro Logic

Remote control only

(When playing DVD, videotapes, and CDs recorded with Dolby Surround)

Enjoy life-like surround effects.

Press [**PRO LOGIC**].

To turn off Dolby Pro Logic

Press [**PRO LOGIC**].

Note

- You can adjust the output level of the speakers if necessary (→ page 33).

Note

Dolby Digital only works with DVD recorded with Dolby Digital. Dolby Pro Logic cannot be used if the source is radio or if headphones are connected.

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Sound field

Remote control only

Speaker level adjustments

If the level of the speakers appears to be different while listening to a source, sit where you would normally and perform the following to adjust the level of all the speakers to the same apparent level.

Preparations

To adjust Dolby Digital

Press [DVD/CD].

Turn other sound field systems off.

To adjust Dolby Pro Logic

Press [PRO LOGIC].

Select any source other than the radio.

1 Press [TEST] to output a test signal.

The test signal is output in the following order.

Dolby Digital

L: Front speaker (left)

C: Center speaker

R: Front speaker (right)

RS: Surround speaker (right)

LS: Surround speaker (left)

※ No signal is output for the subwoofer.

Dolby Pro Logic

L: Front speaker (left)

C: Center speaker

R: Front speaker (right)

S: Surround speaker

※ No signal is output for the subwoofer.

2 Press [VOLUME (+ or -)] to set the volume level normally used for enjoying the source.

3 Press [▲] or [▼] to adjust the level of each speaker to the same apparent level.

To stop the test signal

Press [TEST].

To adjust speaker level during play

1. Press [CH SELECT] to select the speaker channel.

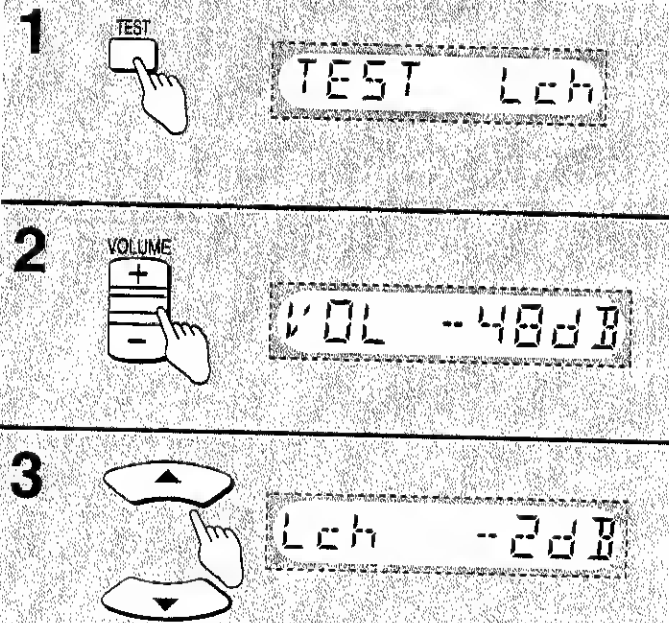
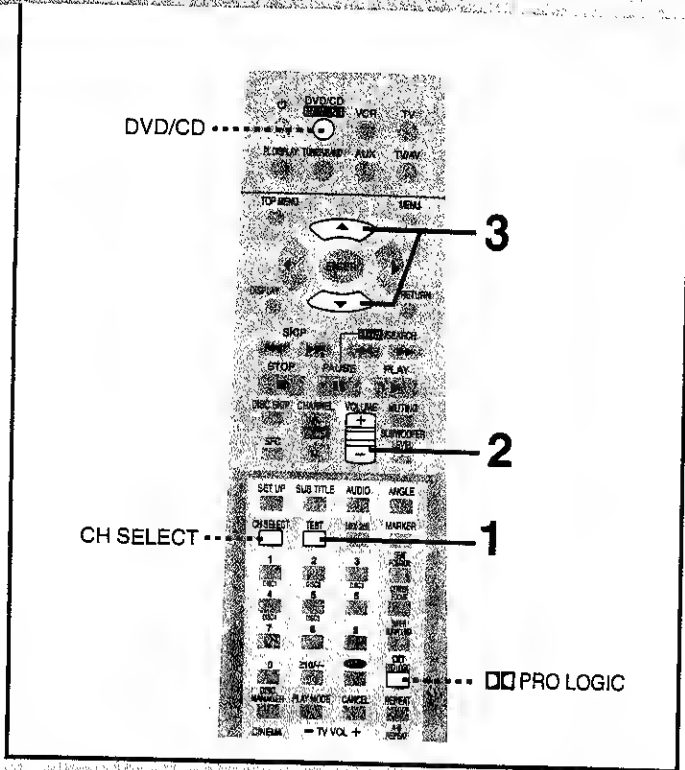
In Dolby Digital

L → C → R → RS → LS

In Dolby Pro Logic

L → C → R → S

2. Press [▲] or [▼].



Sound field

A Enjoying sound with SUPER SURROUND Remote control only

Press [SUPER SURROUND].

Each time you press the button;

MUSIC → MOVIE → STEREO SOUND (off)

To cancel super surround

Press [SUPER SURROUND] and select "STEREO SOUND".

To adjust the level of the surround speakers

1. Press [CH SELECT] to select the speaker channel.
2. Press [▲] or [▼] to adjust the output level.

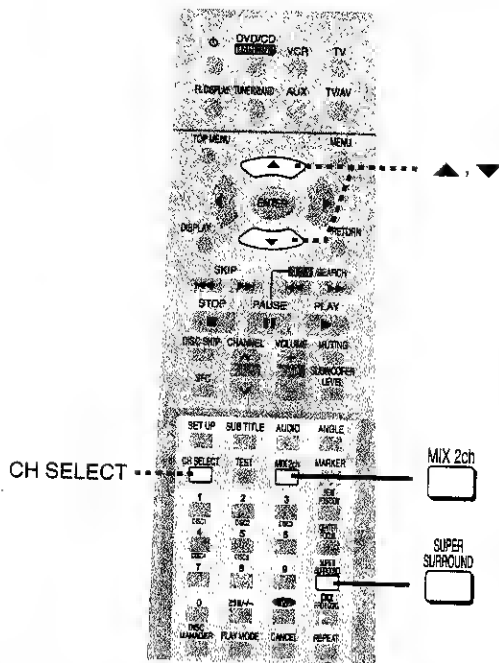
B To down mix to 2 channels Remote control only

This function down mixes 5.1 channel audio signals, like Dolby Digital, to two channels to be output through the front speakers.

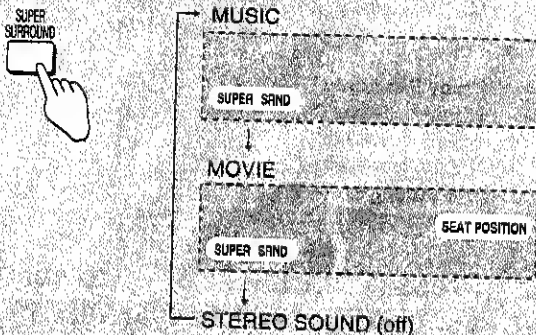
Press [MIX 2ch].

To cancel down mix to 2 channels

Press [MIX 2ch].



A



B



Sound field

A Using the seat position function (SEAT POSITION) Remote control only

Using this function makes you feel like you are sitting in the ideal seating position (in the center of the circle formed by the speakers), even if you cannot due to the layout of your room.

- 1 Press [SEAT POSITION].
- 2 While "►" is flashing
Press the cursor buttons to select a position.

To cancel seat position

Press [SEAT POSITION] to clear "►".

B Using the center focus effect (CENTER FOCUS) Remote control only

You can make the sound of the center speaker seem like it is coming from within the television. Place the center speaker above the television.

Press [CENTER FOCUS].

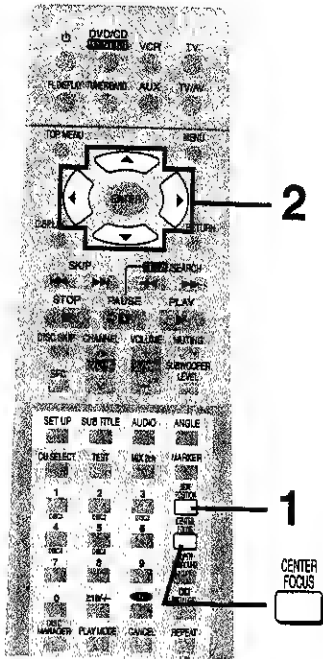
Each time you press the button;

CENTER FOCUS 1 → CENTER FOCUS 2 → Original display

CENTER FOCUS 2 enhances the effect and makes it easier to hear dialogue even at low volume.

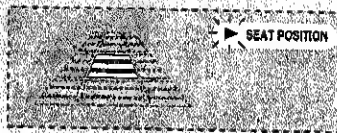
To cancel center focus

Press [CENTER FOCUS] to clear "►".

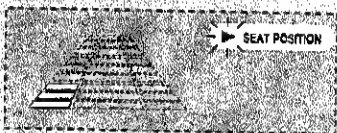
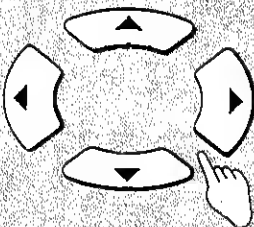


A

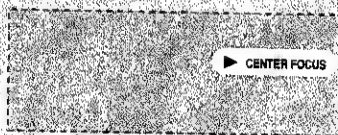
1



2



B



Sound field

Sound Field Control effects (SFC)

Remote control only

SFC can be used with any source.
There are seven SFC modes.

HEAVY: Adds punch to rock.

CLEAR: Clarifies higher sounds.

SOFT: Use this setting for background music.

DISCO: Produces lengthy reverberations like a disco.

LIVE: Adds gloss to vocals.

HALL: Expands the sound to make you feel like you were in a hall.

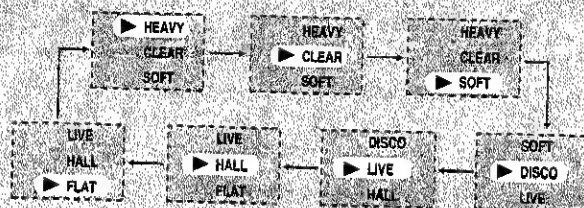
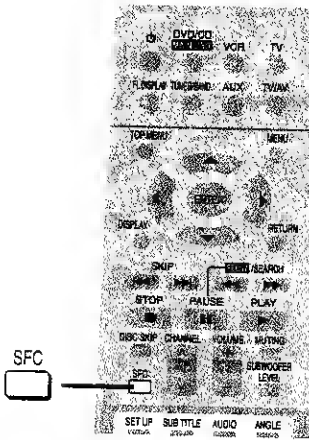
FLAT: No effect is added.

The factory setting is HEAVY.

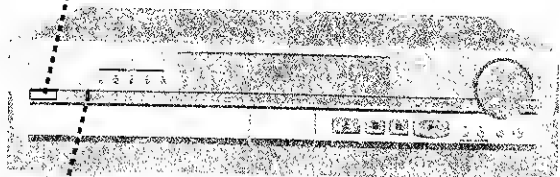
Press [SFC].

To cancel SFC

Press [SFC] to select "FLAT".



⏻/I
(POWER ⏻/I)

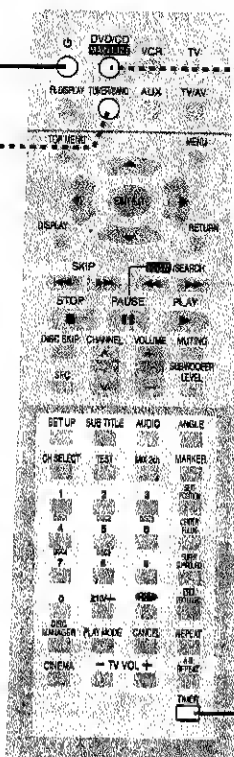


WAKE indicator

3

DVD/CD

TUNER/BAND



1, 2

1

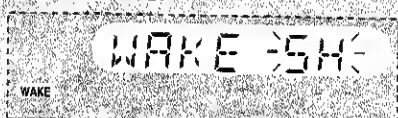
TIMER



Sleep timer mode



Wake timer mode



2

TIMER



3



Timer function

Remote control only

There are two timer functions: the sleep timer and the wake timer. They cannot be used together.

• Sleep timer:

The unit can be set to turn off after 30, 60, or 90 minutes. The timer is canceled if the unit is turned off.

• Wake timer:

The unit can be set to turn on and start playing the radio or an Audio CD, 5, 7, or 9 hours after you turn it off. The timer is canceled if the unit is turned on again.

Preparation

- Press [⏻/I] ([POWER ⏻/I]) to turn the unit on.
- Select the desired source.

Disc

Press [DVD/CD] to display "DVD/CD", and insert an Audio CD, etc.

The radio

Press [TUNER/BAND] to select "FM" or "AM" and tune in the desired station.

1 Press [TIMER] to select the desired timer mode.

The timer mode changes as follows:

SLEEP → WAKE → OFF

2 Press and hold [TIMER] to select the required time.

The display changes as follows:

- In sleep timer mode:

30 → 60 → 90 (minutes)

- In wake timer mode:

5H → 7H → 9H (hours)

3 Wake timer mode only

Press [⏻] to turn off the unit.

Main unit: Press [⏻/I] ([POWER ⏻/I]).

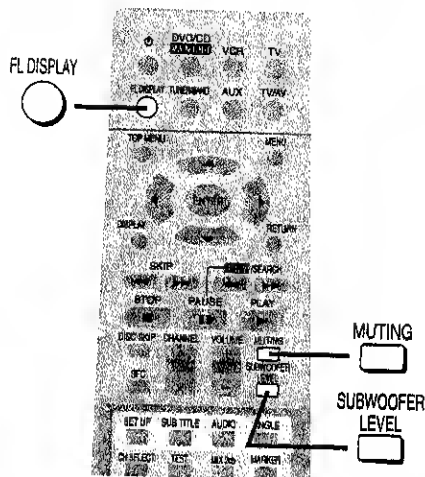
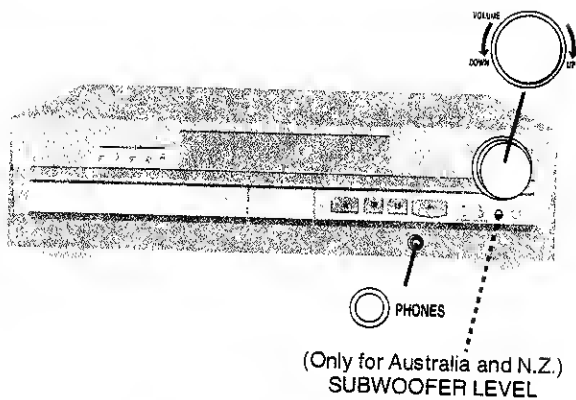
The "WAKE" indicator lights up.

Checking the remaining time on the sleep timer and the time set for the wake timer

Press [TIMER].

To cancel the timer

Press [TIMER] until "OFF" is displayed.



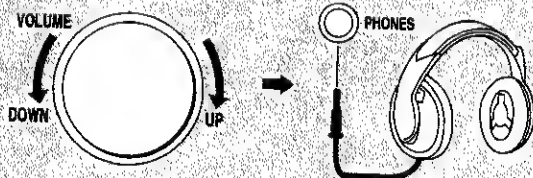
A



B



C



D



Convenient functions

A To mute the volume Remote control only

Press [MUTING].

"MUTING" flashes on the display.

To cancel muting

Press [MUTING] or reduce the volume to minimum and raise it again.

Note

When the system is turned off, the muting operation will be automatically canceled.

B To turn off the unit's display Remote control only

Turning off the display can improve video viewing in a dark or dimly lit room.

Press [FL DISPLAY].

To turn on again

Press [FL DISPLAY].

C To listen through headphones

① Reduce the volume.

② Connect the headphones to the PHONES jack and adjust the volume.

Audio is automatically switched to stereo.

Headphones

Plug type: 6.3 mm stereo

Note

Avoid listening for prolonged periods of time to prevent hearing damage.

D Adjusting the bass

On the remote control

Press [SUBWOOFER LEVEL].

Each time you press the button;

0 → 1 → 2 → 3 → 4

The factory setting is "4".

Sound is not heard from the subwoofer if you select "0".

For Australia and N.Z.

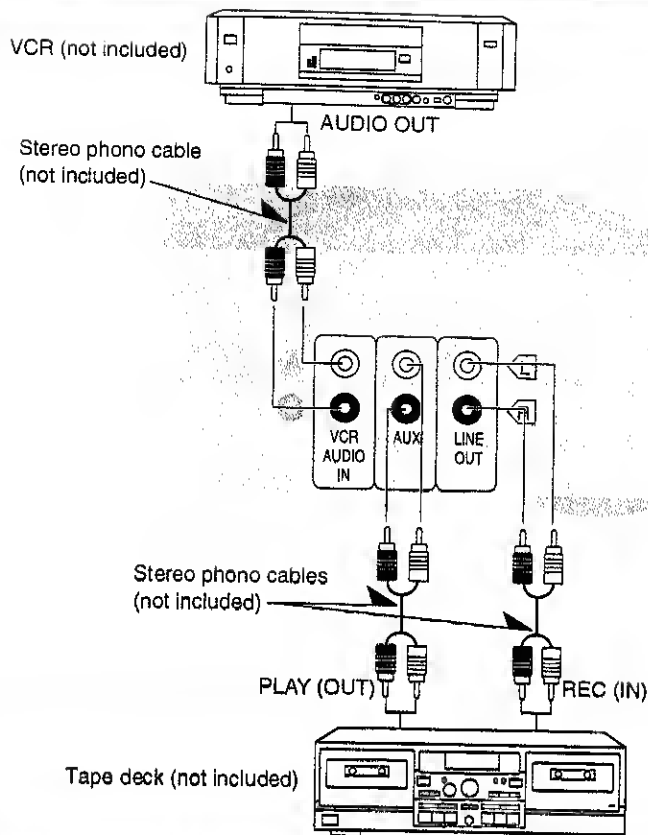
On the main unit: Press [SUBWOOFER LEVEL].

Note

[SUBWOOFER LEVEL] is [RDS] (→ page 29) on models for areas other than Australia and N.Z..

Using other equipment

Connecting other equipment



These are examples of connection. You can connect other recording equipment instead of a cassette deck. A record player, laser disc player, etc. can be connected to the AUX terminals.

To connect a record player

Connect the record player to a phono equalizer to amplify the signal, then connect the phono equalizer to the AUX terminals.

The volume will be very low if it is connected directly.

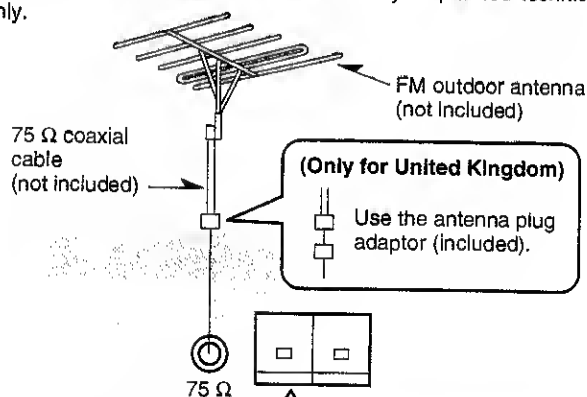
Outdoor antenna connections

Use outdoor antennas if radio reception is poor.

FM outdoor antenna (Using a television antenna)

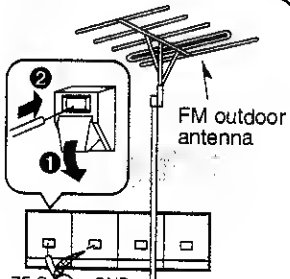
Disconnect the FM indoor antenna.

An outdoor antenna should be installed by a qualified technician only.



(For Australia and N.Z.)

- 1 Remove a piece of the outer insulator. 30 mm
- 2 Twist the shield braid.
- 3 Expose the core wire. 15 mm

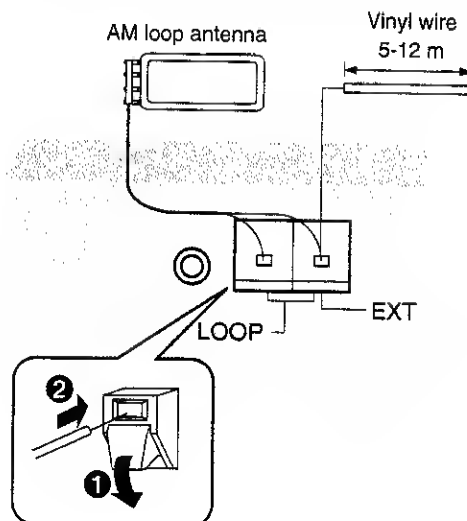


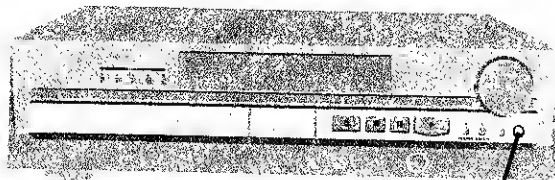
AM outdoor antenna (Using a vinyl wire)

Run a piece of vinyl wire horizontally across a window or other convenient location.

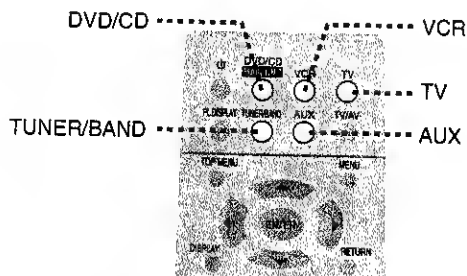
Leave the loop antenna connected.

When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.





1



A

1

SELECTOR



B

1

SELECTOR



Using other equipment

A Listening to an external source

1 Press [SELECTOR] to select "TV", "VCR" or "AUX".

Each time you press the button;

DVD/CD → FM → AM → TV → VCR → AUX

Remote control: Press [TV], [VCR] or [AUX].

2 Start the source.

B Recording to other equipment

Preparation

Connect and prepare the recording equipment (→ page 39).

1 Press [SELECTOR] to select "DVD/CD", "FM" or "AM".

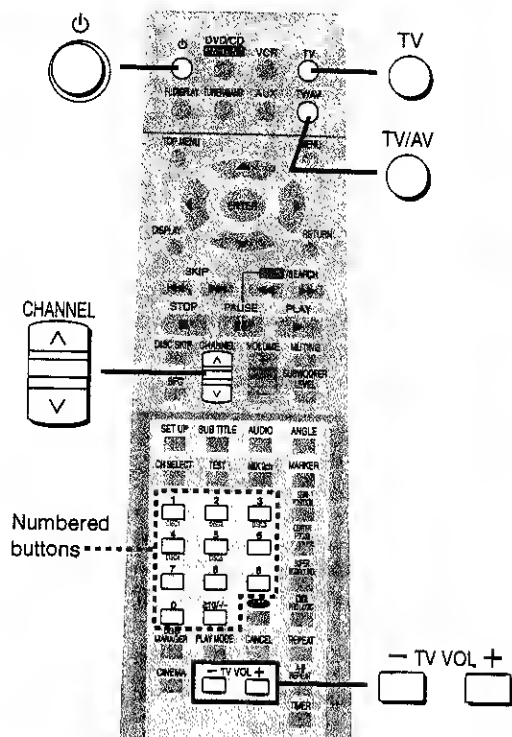
Each time you press the button;

DVD/CD → FM → AM → TV → VCR → AUX

Remote control: Press [DVD/CD] or [TUNER/BAND].

2 Begin recording and start the source.

A



Using the remote control with other equipment

You can use the remote control to operate a Panasonic television or video deck.

A Operating a television

Switching to TV operation mode

Press [TV].

The button lights.

The main unit also switches to TV.

Turning the TV on

Press [⏻].

Changing channels

Press [CHANNEL (▲ or ▼)].

You can also use the numbered buttons to select the channel.

For channels 10 or over, press [≥10/---] then the two digits.

10 ch: [≥10/---] → [1] → [0]

11 ch: [≥10/---] → [1] → [1]

Adjusting the volume

Press [TV VOL (← or +)].

Switching the television's video input mode

Press [TV/AV].

B Operating a video deck

Switching to VCR operation mode

Press [VCR].

The button lights.

The main unit also switches to VCR.

Turning the video deck on

Press [⏻].

Changing channels

Press [CHANNEL (▲ or ▼)].

Channels 1 to 10 can also be selected with the numbered buttons.

[0] selects channel 10.

Starting play

Press [PLAY ▶].

Fast-forwarding and rewinding

Press [SLOW/SEARCH (◀◀ or ▶▶)].

To stop play

Press [STOP ■].

Note

- Some models cannot be operated by this remote control.
- To prevent accidental operation, press [DVD/CD] to light the button after operation so the remote control is ready to operate the main unit.

Other functions

Initial settings

Summary of initial settings

This chart shows the initial settings for this unit.
See page 44 for details on operation.
Shaded items are the factory settings.

The menu and on-screen message language has been factory pre-set to English. You can change the language by going to "Menu Language" in the Display menu.

| Main menu | Menu | Options |
|---------------------------------------|---|---|
| Disc DVD | Audio Choose the preferred audio language. | English French German Italian Spanish Original Other **** |
| | Subtitle Choose the preferred subtitle language. | Automatic English French German Italian Spanish Other **** |
| | Menus Choose the preferred language for disc menus. | English French German Italian Spanish Other **** |
| | Ratings Set a ratings level to limit DVD play. | Setting ratings (When level 8 is selected) 8 No Limit 1 to 7 0 Lock All Changing ratings (When level 0-7 is selected) Unlock Player Change Password Change Level Temporary Unlock |
| Video DVD VCD | TV Aspect Choose the setting to suit your television and preference (⇒ page 13). | 4:3 Pan & Scan 4:3 Letterbox 16:9 |
| | Still Mode Specify the type of picture shown when paused. | Automatic Field Frame |
| | NTSC Disc Output Choose whether PAL60 or NTSC signal is output during playback of NTSC discs (⇒ page 6). | PAL60 NTSC |
| Audio | Speaker Setting DVD (Dolby Digital only) Set the delay time for your center and surround speakers (⇒ page 45). | Center: 0 / 1.3/2.6/3.9/5.3 ms Surround (L/R): 0 / 5.3/10.6/15.9 ms |
| | D. Range Compression DVD (Dolby Digital only) Change the dynamic range for listening with low-volume. | Off On |
| | Audio during Seerch DVD VCD Choose whether to have sound during seerch. | On Off |
| Display | Menu Language Choose the preferred language for these menus and the on-screen messages. | English Français Deutsch Italiano Español |
| | On-Screen Meseegee Choose whether to show on-screen messages or not. | On Off |

Changes to the initial settings remain intact after the unit is turned off.
Do the setting procedures again to restore to the original settings.

| | Remarks |
|---|--|
| <p>"Other ****": Input a code number with the numbered buttons (⇒ page 45).</p> <p>"Original": The original language of each disc will be selected.</p> <p>"Automatic": If the language selected for "Audio" is not available, subtitles of that language will automatically appear if available on that disc.</p> | Some discs are designed to start in a certain language despite any changes you make here. |
| <p>Level 8: All DVDs can be played.</p> <p>Level 1 to 7: Prohibits play of DVDs with corresponding ratings recorded on them.</p> <p>Level 0: Prohibits play of all DVDs.</p> | <ul style="list-style-type: none"> • The password screen is shown if you choose levels 0 to 7. • Select "Level 0" to prevent play of discs that do not have ratings levels recorded on them. |
| | The password screen is shown when you select "Ratings", if levels 0 to 7 have been selected. Input a 4-digit password with the numbered buttons. |
| <p>Field: Less blurred field stills are shown. Select if jittering occurs when "Automatic" is selected.</p> <p>Frame: Sharper frame stills are shown. Select if small text or fine patterns cannot be seen clearly when "Automatic" is selected.</p> | |
| <p>PAL60: When connected to a PAL television.</p> <p>NTSC: When connected to a NTSC or a multi-system television.</p> | |
| When the center/surround speakers cannot be located in the ideal position. | |
| | Dynamic range is the difference between the loudest sound and the softest sound. By compressing this range, you can listen at low volume but still enjoy clear dialogue. |
| | |
| | |
| | |

Initial settings

Language code list

| | | | |
|-----------------------|--------------------|------------------------|------------------|
| 6565: Afar | 7079: Faroese | 7878: Lingala | 8375: Slovak |
| 6568: Abkhazian | 7082: French | 7679: Laotian | 8376: Slovenian |
| 6570: Afrikaans | 7089: Frisian | 7684: Lithuanian | 8377: Samoan |
| 6577: Ameharic | 7165: Irish | 7686: Latvian, Lettish | 8378: Shona |
| 6582: Arabic | 7168: Scots Gaelic | 7771: Malagasy | 8379: Somali |
| 6583: Assamese | 7176: Galician | 7773: Maori | 8381: Albanian |
| 6588: Aymara | 7178: Guarani | 7775: Macedonian | 8382: Serbian |
| 6590: Azerbaijani | 7185: Gujarati | 7776: Malayalam | 8385: Sundanese |
| 6665: Bashkir | 7265: Hausa | 7778: Mongolian | 8386: Swedish |
| 6669: Byelorussian | 7273: Hindi | 7779: Moldavian | 8387: Swahili |
| 6671: Bulgarian | 7282: Croatian | 7782: Marathi | 8465: Tamil |
| 6672: Bihari | 7285: Hungarian | 7783: Malay | 8469: Telugu |
| 6878: Bengali; Bangla | 7289: Armenian | 7784: Maltese | 8471: Tajik |
| 6679: Tibetan | 7365: Interlingua | 7789: Burmese | 8472: Thai |
| 6682: Breton | 7378: Indonesian | 7865: Nauru | 8473: Tigrinya |
| 6765: Catalan | 7383: Icelandic | 7869: Nepali | 8475: Turkmen |
| 6779: Corsican | 7384: Italian | 7876: Dutch | 8476: Tagalog |
| 6783: Czech | 7387: Hebrew | 7879: Norwegian | 8479: Tonga |
| 6789: Welsh | 7465: Japanese | 7982: Oriya | 8482: Turkish |
| 6865: Danish | 7473: Yiddish | 8065: Panjabi | 8484: Tatar |
| 8869: German | 7487: Javanese | 8076: Polish | 8487: Twi |
| 6890: Bhutanal | 7565: Georgian | 8083: Pashto, Pushto | 8575: Ukrainian |
| 8976: Greek | 7575: Kazakh | 8084: Portuguese | 8582: Urdu |
| 6878: English | 7576: Greenlandic | 8185: Quechua | 8580: Uzbek |
| 6978: Esperanto | 7577: Cambodian | 8277: Rhaeto-Romance | 8673: Vietnamese |
| 6983: Spanish | 7578: Kannada | 8279: Romanian | 8679: Volapük |
| 6984: Estonian | 7578: Korean | 8285: Russian | 8779: Wolof |
| 8985: Basqua | 7583: Kashmiri | 8365: Sanskrit | 8872: Xhosa |
| 7065: Persian | 7585: Kurdish | 8368: Sindhi | 8978: Yoruba |
| 7073: Finnish | 7589: Kirghiz | 8372: Serbo-Croatian | 9072: Chinese |
| 7074: Fiji | 7665: Latin | 8373: Singhalese | 8085: Zulu |

Calculating delay time

The sound from speakers can reach the listening position at different times depending on placement. You can allow for this difference by changing the delay time of the center and surround speakers.

Center speaker delay time

If $D_1 \leq D_2$, then set delay time to 0 ms.

If $D_1 > D_2$, then set delay time as follows.

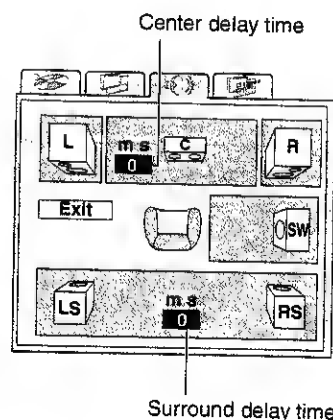
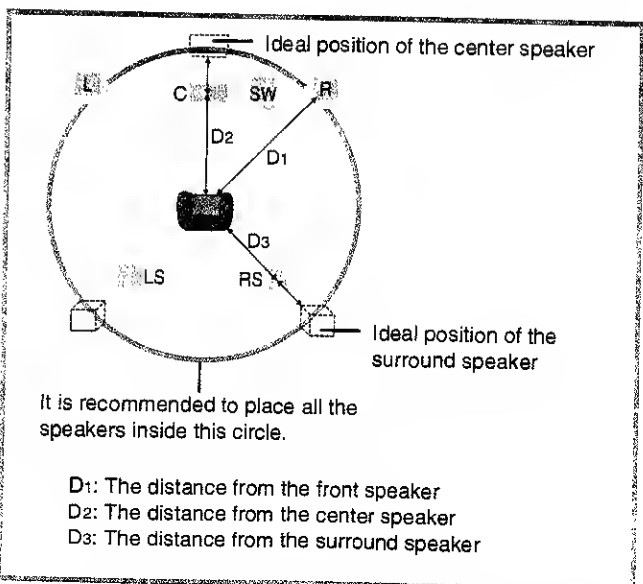
| Difference between D_1 and D_2 | Delay time |
|------------------------------------|------------|
| 50 cm | 1.3 ms |
| 100 cm | 2.6 ms |
| 150 cm | 3.9 ms |
| 200 cm | 5.3 ms |

Surround speaker delay time

If $D_1 \leq D_3$, then set delay time to 0 ms.

If $D_1 > D_3$, then set delay time as follows.

















| Difference between D_1 and D_3 | Delay time |
|------------------------------------|------------|
| 200 cm | 5.3 ms |
| 400 cm | 10.6 ms |
| 600 cm | 15.9 ms |



How different kinds of software appear on your television

DVD software is recorded in a variety of picture formats, and how they appear on your TV depends on the software, the kind of TV you have, and the picture mode your TV is set to.

- Letterbox refers to pictures where black bands appear at the top and bottom.
- Pan & scan refers to pictures where part of the picture is cut off so it fills the whole screen.

| Television and picture mode Software format | 4:3 | 16:9 full mode | 16:9 zoom mode | 16:9 auto mode |
|--|--|---|--|---|
| Wide screen, pan and scan | Edges cut off  | Full screen  | Top and bottom cut off  | Full screen  |
| Wide screen, non-pan and scan | Letterbox  |  |  |  |
| Regular (4:3) | Full screen  | Screen stretched horizontally  | Top and bottom cut off  | Full screen with black bands on the left and right  |
| Regular (4:3) letterbox | Letterbox  | Letterbox with screen stretched horizontally  | Full screen  | Letterbox with extremities of picture stretched  |

The names given to the television picture modes depend on the maker of your television. There may also be slight differences in how the pictures appear on the screen. Refer to your television's operating instructions for details.

Glossary

Video

Frame

Frames are the still pictures that go together to make a moving picture. There are about thirty frames shown each second.



Field

One frame is made up of two fields. A regular television shows these fields one after the other to create frames.



One field

Frame still and field still

A still is shown when you pause a moving picture. A frame still is made up of two alternating fields, so the picture may appear blurred, but overall quality is high. A field still is not blurred, but it has only half the information of a frame still so picture quality is lower.

I/P/B

MPEG 2, the video compression standard adapted for use with DVD, codes frames using these three picture types.

I: Intra coded picture (I-picture)

This is the standard picture and is a complete picture in itself. This means it has the best picture quality and is the best to use when adjusting the picture.

P: Predictive coded picture (P-picture)

This picture is calculated based on past I and P-pictures.

B: Bidirectionally-predictive coded picture (B-picture)

This picture is calculated by comparing past and future I and P-pictures so it has the lowest volume of information.

Digital audio

Decoder

A decoder restores the coded audio signals on DVDs to normal. This is called decoding.

Dolby Digital

This method of coding digital signals was developed by Dolby Laboratories. The signals are highly compressed, enabling a large amount of information to be recorded on one disc.

Sampling rate

This is the number of samples of sound taken per second during conversion to a digital signal. Sampling frequency is expressed in kilohertz (kHz). A high sampling frequency results in a sound close to the original when played back.

PCM (pulse code modulation), Linear PCM

PCM is the usual digital method used for music CDs. DVDs have a greater volume so they use linear PCM, which has a higher sampling rate.

Bitstream

This is the digital form of multiple channel audio data (e.g., 5.1 channel) before it is decoded into its various channels.

Other

Track

This is the smallest division on CD and video CD, and usually equates to a single song.

Chapter

This is the smallest division on DVD and is roughly equivalent to a track.

Title

This is the largest division on DVD.

Playback control (PBC)

This method of controlling disc play is included on version 2.0 video CDs. You are able to interact with the disc through menus.

Troubleshooting guide

Before requesting service, make the below checks. If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

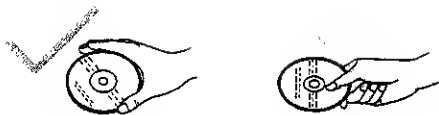
| Common problems | | Reference pages |
|--|--|-------------------|
| No power. | <ul style="list-style-type: none"> • Ensure the mains lead is connected. | 10 |
| No sound. | <ul style="list-style-type: none"> • Turn the volume up. • Turn muting off. • Check speaker connections. | 15, 29 38 8 |
| Sounds are unfixed or left and right are reversed. | <ul style="list-style-type: none"> • Check speaker connections. | 8 |
| Humming heard during play. | <ul style="list-style-type: none"> • A mains lead or fluorescent light is near the cables. Keep other appliances and cords away from this unit's cables. • If possible in your area, turn the AC mains lead's plug or connector over to reverse the plug's polarity. | — — |
| Sound stops suddenly during play. | <ul style="list-style-type: none"> • The speaker cords may have shorted. Turn the unit off and reconnect the cords. | 8 |
| The unit's display is off. | <ul style="list-style-type: none"> • Press [FL DISPLAY] on the remote control to turn the display on. | 38 |
| "ERROR" is displayed. | <ul style="list-style-type: none"> • Incorrect operation performed. Read the instructions and try again. | — |
| "F61" is displayed. | <ul style="list-style-type: none"> • The speaker cords may have shorted. Turn the unit off and reconnect the cords. If this does not fix the problem, consult your dealer. | 8 |
| No sound from the subwoofer. | <ul style="list-style-type: none"> • Check that the subwoofer has not been set to "0". | 38 |

| Radio | | Reference pages |
|---|---|--------------------|
| The radio cannot be tuned in or there is a lot of noise and interference. | <ul style="list-style-type: none"> • Adjust the position of the FM or AM antenna. • Turn off nearby televisions, video decks, and satellite receivers. • Separate the antenna from other cables and leads. • You may need an outdoor antenna. | 10 — — 39 |

| Disc | | Reference pages |
|--|--|-----------------|
| The display is wrong or play won't start. | <ul style="list-style-type: none"> • The disc may be upside down. • Replace the disc if it is scratched, warped, or nonstandard. • Condensation may have formed in the player due to a sudden change in temperature. Wait about an hour for it to clear and try again. | 14 50 — |
| Certain sections cannot be played. | <ul style="list-style-type: none"> • Wipe the disc with a soft cloth if it is dirty. | 50 |
| Noise is output when a CD is played. | <ul style="list-style-type: none"> • Check the disc. If it is a DTS CD, it cannot be played. | — |
| "DTS NO AUDIO" appears on the display. | <ul style="list-style-type: none"> • This unit is unable to decode DTS signals. | — |
| "DTS CD" appears on the display. | <ul style="list-style-type: none"> • This unit is unable to decode DTS signals. | — |
| "DVD U11" appears on the display. | <ul style="list-style-type: none"> • The disc is dirty. Wipe it with a soft cloth. | 50 |
| "DVD H□□" appears on the display. | <ul style="list-style-type: none"> • A problem has occurred. Turn the unit off and unplug the AC mains lead. Wait a moment and then plug the mains lead in and turn on the unit again. If the unit is still not working correctly, consult your dealer. | — |
| "TAKE OUT DISC" appears on the display. | <ul style="list-style-type: none"> • A problem has occurred with the tray mechanism. The tray will open automatically. Take out the disc and close the tray. The unit will make the disc changing noises for a few moments and then should operate normally. | — |
| You have forgotten your ratings password. | <ul style="list-style-type: none"> • Reset the unit to its original factory settings. Do the following to restore the unit to the condition it was in at the time of shipment. This clears the ratings settings. Press [■] on the main unit and [≥10/- -] on the remote control at the same time for about 3 seconds until the message "Initialized" disappears from the television screen. | — |
| Languages you selected in the initial settings menu are not used for the soundtrack and subtitles. | <ul style="list-style-type: none"> • The selected languages are not recorded on the DVD or the DVD has been designed to automatically play a certain language. | — |

| The remote control | | Reference pages |
|----------------------------------|---|------------------------|
| The remote control doesn't work. | <ul style="list-style-type: none"> • Check the batteries are inserted correctly. • Aim the remote control at the main unit and remove obstacles between them. • Replace the batteries if they are worn out. • It may be in the TV or VCR operation mode. Press [DVD/CD] to operate this unit. • This remote control cannot operate some televisions or videos. | 7 7 — 12 — |

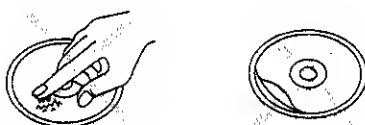
A



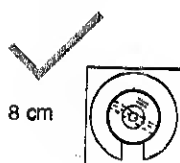
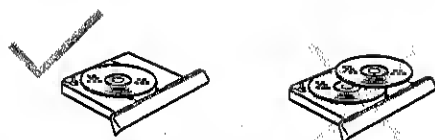
Play surface (shiny side)



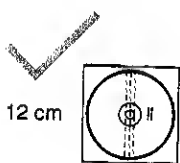
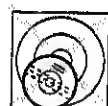
Wipe from inside outward.



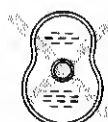
B



8 cm



12 cm



Concerning discs

With this system, you can only play discs having these marks. However, do not use irregular shaped discs. Discs of this sort can damage the unit.



A Handling precautions

- If you are taking the disc from a cold to a warm environment, moisture may form on the disc. Wipe with a soft, dry lintfree cloth before using the disc.
- Do not write on the label side with a ball-point or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not attach labels or stickers to discs. (Do not use discs with exposed adhesive from tape or left over peeled off stickers.)
- Do not use scratch-proof protectors or cover other than those specified for use with this system.
- Do not use discs printed with label printers available on the market.

Storage precautions

Be sure to store discs in their cases to protect them from dust, scratches, and warping.

Do not place or store discs in the following places.

- Locations exposed to direct sunlight
- Humid or dusty locations
- Locations directly exposed to a heat vent or heating appliance
- In the glove compartment or on the rear deck of an automobile

B To prevent damage

Always observe the following points.

- Load only 1 disc per tray.
- Load discs as shown in figure.
- An adaptor is not needed with 8 cm discs (singles).
- Set the system on a flat, level surface.
Do not set it on top of magazines, inclined surfaces, etc.
- Do not move the system while trays are opening/closing, or when loaded.
- Do not put anything except discs in trays.
- Do not use cleaning discs or discs which are badly warped or cracked.
- Do not use discs with poorly attached labels or stickers.
Adhesive protruding from underneath stickers or left over from peeled off stickers can cause your stereo to malfunction.
- Do not use irregular shaped discs.

Specifications

■ AMPLIFIER SECTION

RMS TTL POWER OUTPUT 300 W
(10 % total harmonic distortion)

FRONT 1 kHz 36 W per ch (6 Ω)
CENTER 1 kHz 36 W (6 Ω)
SURROUND 1 kHz 36 W per ch (6 Ω)
SUBWOOFER 80 Hz 120 W (6 Ω)

DIN TTL POWER OUTPUT 220 W
(1 % total harmonic distortion)

FRONT 1 kHz 26 W per ch (6 Ω)
CENTER 1 kHz 26 W (6 Ω)
SURROUND 1 kHz 28 W per ch (6 Ω)
SUBWOOFER 80 Hz 90 W (6 Ω)

Input sensitivity/input impedance
AUX 250 mV, 10 k Ω

■ FM TUNER SECTION

Frequency range 87.50–108.00 MHz (50 kHz steps)
Sensitivity 18.3 dBf (1.8 μ V, IHF)
Antenne terminals 75 Ω unbalanced

■ AM TUNER SECTION

Frequency range 522–1629 kHz (9 kHz steps)
Sensitivity S/N 20 dB at 999 kHz 500 μ V/m

■ DISC SECTION

Disc
DVD 8 cm/12 cm single-sided, single-layer
8 cm/12 cm single-sided, double-layer
8 cm/12 cm double-sided, double-layer
(one layer per side)
8 cm/12 cm (CD-R/RW)

CD/VCD

Video

Signal system NTSC/PAL (depending on disc format)
Output level Composite video 1 Vp-p (75 Ω)
S-video Y 1 Vp-p (75 Ω)
S-video C 0.300 Vp-p (75 Ω /PAL)
0.286 Vp-p (75 Ω /NTSC)

Audio

Sampling frequency
CD 44.1 kHz
DVD 48 kHz/96 kHz
Decoding 18/20/24 bit linear
Wow and flutter Below measurable limit
D/A converter Delta-sigma DAC

Pick up

Beam Source Semiconductor Laser

Wavelength

DVD 658 nm
VCD/CD 790 nm

(For Norge)

Bølge lengde

DVD 658 nm
VCD/CD 790 nm

Laser-styrke Ingen farlig stråling sendes ut

■ SPEAKER SECTION

Front, center and surround speakers (SB-AFC80)

Type 1 way 1 speaker Bass-ref.
Speaker unit
Full range 8 cm cone type
Impedance 6 Ω
Input power 60 W
MUSIC 30 W
DIN
Sound pressure level 79 dB/W (1.0 m)
Frequency range 80 Hz–22 kHz (–16 dB)
110 Hz–20 kHz (–10 dB)
Dimensions (W×H×D) 88×158×105 mm
Mass 0.8 kg

Subwoofer (SB-W80A)

Type 1 way 1 speaker Bass-ref.
Speaker unit
Woofer 17 cm cone type
Impedance 6 Ω
Input power 180 W
MUSIC 90 W
DIN
Sound pressure level 80 dB/W (1.0 m)
Frequency range 41 Hz–1.8 kHz (–16 dB)
45 Hz–1.6 kHz (–10 dB)
Dimensions (W×H×D) 200×450×300 mm
Mass 5.9 kg

■ GENERAL

Power supply AC 230–240 V, 50 Hz
Power consumption 188 W
Standby 0.60 W
Dimensions (W×H×D) 430×114×368 mm
Mass 8.4 kg

Note:

- Specifications are subject to change without notice.
Mass and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

Maintenance

If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.

- Never use alcohol, paint thinner or benzine to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.

When moving the unit

- 1 Remove all discs.
- 2 Press [⏻] ([POWER ⏻]) to turn the unit off.
- 3 Disconnect the AC mains lead.

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